TCHD Digital Video Technology Development (Beijing) Co.,Ltd.

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Tianchuang Hengda

TCHD Video

Digital Video Technology Application Solution Provider

Digital Video Technology Application Solutions Provider

- 4K/1080P video capture card
- 4K/1080P live codec
- SDVoE series
- 4K/1080P 3D video converter
- 4K/1080P video converter
- 4K/1080P field camera
- 4K/1080P HD live camera
- Embedded medical recording host
- 4K/1080P medical video recorder
- 4K medical video board
- Surgical mobile teaching trolley

Tianchuang Hengda Digital Video Technology Development (Beijing) Co., LTD

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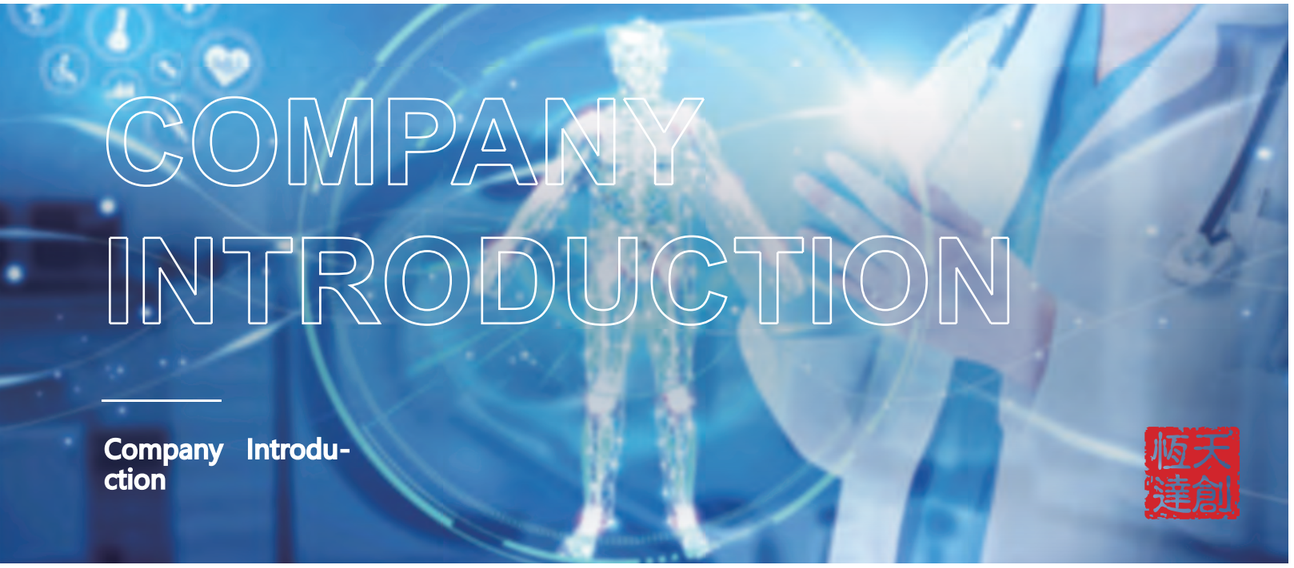


COMPANY INTRODUCTION

Company Introduction

Tianchuang Hengda Digital Video Technology Development (Beijing) Co., LTD. (TCHD Digital Video Technology Development (Beijing) Co., LTD.) is located in Zhongguancun Innovation Park, Haidian District, Beijing. It is a high-tech company specializing in digital video hardware and software technology development and integration services.

Founded in 2004, the company has accumulated over two decades of expertise in the digital video industry. Its professional hardware and software teams have developed cutting-edge solutions including HD video capture cards, live cameras, production consoles, encoding devices, converters, recording systems, and virtual studio all-in-one machines. The company has also pioneered industry-leading system applications for virtual studios, broadcast production, online streaming, educational MOOCs, hard disk broadcasting, media asset management, educational recording systems, conference live-streaming equipment, outdoor broadcasting gear, and streaming media servers.

Tianchuang Hengda provides customized software/hardware development and SDK technical support services tailored to diverse client needs. Moving forward, we remain committed to market-driven strategies and technology as our core strength, dedicated to building China's premier audio-visual ecosystem. Our mission is to deliver premium products and services for digital video

20 +

Over 20 years of experience in the audiovisual industry

\+

200 Solutions

More than 200 industry video hardware and software solutions, full scenario coverage

Multidimensionality

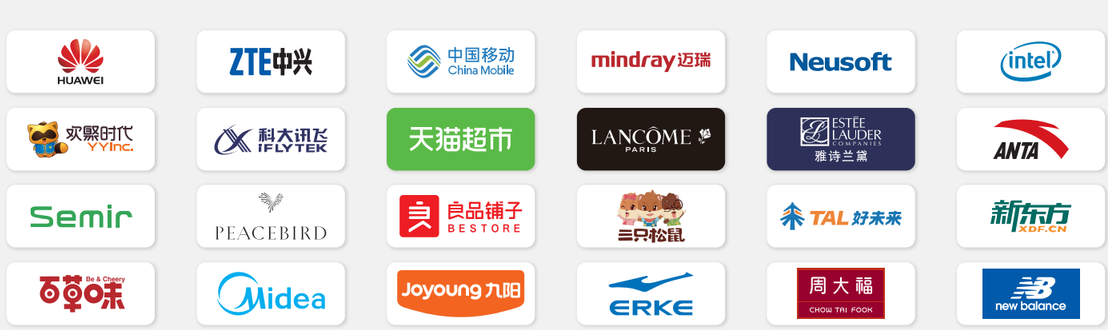
Multi-dimensional system-level stability assurance, providing you with a full range of technical support

Requirement

To meet the video hardware and software application needs of small and medium-sized enterprises to multinational groups

Brand Credentials

Let customers enjoy worry-free service!



Core Advantage

Quality Commitment

Quality Promise

More than 20 years of video industry accumulation, creating an outstanding brand

Channel Sales

Channel sales

Channel retail has two channels, and the products and services are cost-effective

Customization

Professional custom

A variety of products, provide customization, integration methods are diversified

Worry Free After Sale

Worry-free after-sales

Authentic product guarantee, national joint warranty, rapid feedback

applications across industries.

4K/1080P Video Capture Card

Low Power Consumption and No Latency

TC-710N1-L HDMI

Maximum resolution	4096×2160@60/50/30/25/24fps
host interface	PCIe×4 (Gen2)
Video input / video loop out-put	1×HDMI 2.0
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-710N1 HDV

Maximum resolution	4096×2160@60/50/30/25/24fps
host interface	PCIe×4 (Gen2)
video in	1×HDMI2.0, 1×DVI-D, 1×DP
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-710N1-L HS

Maximum resolution	4096×2160@60/50/30/25/24fps
host interface	PCIe×4 (Gen2)
video in	2×HDMI 2.0
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-700N1

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1×HDMI, 1×DVI-I, 1×YPbPr, 1×SDI, 1×CVBS, 1×S-Video(RGB/YUV 420/422/444 8/10bits)
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-700N1-L AIO

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1×SDI1×DVI-I, (DVI can be converted to: HDMI/CVBS/S-Video/YPbPr/VGA) (RGB/YUV 420/422/4448/10bits)
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

1080P Video Capture Card

Low power consumption and no latency

TC-700N1-L HDV

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	DVI-I (convertible to VGA, HDMI) S-Video, YPbPr, CVBS
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-700N1-L DVI

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1×DVI-I (convertable to 1×HDMI, 1×VGA, 1×CVBS, 1×S-Video, 1×YPbPr)
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-749

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1×HDMI, 1×CVBS, 1×S-Video
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-550N1-L DVI

Maximum resolution	1920×1200p@30/25/24fps
host interface	PCIe×1 (Gen1)
video in	1×DVI-I (convertable to 1×HDMI, 1×VGA, 1×CVBS, 1×S-Video, 1×YPbPr)
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-542N1

resolution ratio	1920×1200p@60/50/30/25/24fps … 720×576i@50fps
host interface	PCIe×1 (Gen2)
video in	1×HDMI, 1×DVI-I, 1×YPbPr, 1×SDI, 1×CVBS, 1×S-Video
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

1080P Video Capture Card

Low power consumption and no latency

TC-540N1-L

Maximum resolution	1920×1080p@60/50/30/25/24fps
host interface	PCIe×1 (Gen1)
video in	1×SDI, 1×DVI-I convertible (1×HDMI, 1×CVBS, 1×S-Video, 1×YPbPr)
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-400N1 AIO

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1×HDMI, 1×DVI-I, 1×YPbPr, 1×SDI, 1×CVBS, 1×S-Video
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-400N1-L AIO

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1 × HDMI, 1 × DVI-I, 1 × YPbPr, 1 × SDI, 1 × CVBS, 1 × S-Video
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-400N1-L HDV

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
Video input/video ring out	1 × DVI-I, 1 × YPbPr, 1 × S-Video, 1 × CVBS
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-400N1-L SDI+HDMI

Maximum resolution	1920×1080p@60/50fps
host interface	PCIe×1 (Gen2)
video in	1 × SDI, 1 × HDMI
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

1080P/ Standard Definition Video Capture Card

Low power consumption and no latency

TC-550N2 MC TVI

resolution ratio	1920×1080p@60/50/30/25fps ··· 720×576i@50fps
host interface	Minicard (PCIe×1)
video in	2×TVI
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-390N1

resolution ratio	NTSC:720×480@30fps···320×240@30fps , PAL:720×576@25fps···320×288@25fps
host interface	PCIe×1 (Gen2)
Audio/video input	1 channel CVBS, S-Videol video interface, 1 channel Line in audio interface
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 10

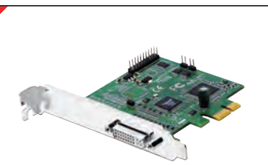
TC-360N1

resolution ratio	NTSC:720×480@30fps···320×240@30fps , PAL:720×576@25fps···320×288@25fps
host interface	PCIe×1 (Gen2)
Audio/video input	1×CVBS, S-Videol video interface, 1×Line in audio interface
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 10

TC-8000SD PRO

resolution ratio	NTSC:720×480@30fps···320×240@30fps , PAL:720×576@25fps···320×288@25fps
host interface	PCIe×1
video in	8×BNC
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-4000SD PRO



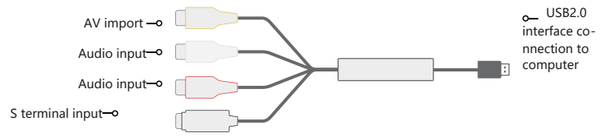
resolution ratio	NTSC:720×480@30fps···320×240@30fps , PAL:720×576@25fps···320×288@25fps
host interface	PCIe×1
video in	4×BNC
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

Standard Video Capture Card

Low Power Consumption and No Latency

TC-UB652

resolution ratio	720×576p@50fps ··· 352×288p@50fps
host interface	USB 2.0
video in	1 channel S terminal + 1 channel CVBS + 2 channels stereo audio
compressed format	Soft compression
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10



4K Live Codec

Low Power Consumption and No Latency

4K ULTRA HD

TC-460H

Video input / video loop output	1 channel HDMI / 1 channel HDMI
Maximum video input resolution	4096x2160@60 (backward compatibility)
Color space	HDR10 10bit
Coding type	H.265 /H.264/MJPEG optional
Coding frame rate	5-60 adjustable
Resolution after coding	4096x2160/3840x2160/1920x1080 ··· 176x144 is the same as the input resolution
Code flow control	CBR/VBR optional
stream	Supports RTMP/RTSP/HTTP TS/HTTP FLV/HLS/SRT/UDP multicast/RTP multicast
memory	USB 3.0 drives/SD cards in NTFS/EXFAT/FAT32 formats
look over	Built-in SAMBA server, Net neighbors view video

TC-460 HS

Audio and video input	Video input type	1 channel HDMI / 1 channel SDI
	SDI import	Supports 12G SDI input 3840×2160@60 10bit up to 4096×2160@60 10bit
	HDMI import	Supports UHD HDMI input 3840×2160@60 10bit up to 4096x2160@60 10bit
	Audio input	1 channel HDMI built-in audio, 1 channel SDI built-in audio, 2 channels analog external audio
	Maximum resolution	4096x2160@60 (backward compatibility)
video coding	Maximum coding capacity	SDI and HDMI can be input and encoded at the same time, one 4K60 + one 1080P60
	Coding type	H.265
	coded format	4.2.0 8bit / 4.2.2 8bit / 4.0.0 8bit / 4.2.0 10bit / 4.2.2 8bit / 4.0.0 8bit
	Coding type	H.264
	coded format	4.2.0 8bit / 4.2.2 8bit / 4.2.0 10bit / 4.2.2 8bit
	Coding frame rate	Same as input frame rate/auto/customizable frame rate 5-60 adjustable
	Keyframe interval (frame)	5-300 adjustable
	Bit rate (kbit)	32-64000 adjustable
	Resolution after coding	4096x2160/3840x2160/2560x1440 ··· 320x180/240x180/ Same as input resolution
	Code flow control	cbr/vbr
	stream	Supports RTMP/ RTSP/ RTSP (S) /HTTP TS/HTTP FLV/HLS/SRT /UDP multicast / RTP multicast
Audio coding	Audio input	Automatic/HDMI/SDI/Analog 1/Analog 2
	Coding sampling rate	44100/48000/ Same as the input sampling rate
	coding method	AAC/AAC+/AAC++/MP3/MP2/AC3/Opus
	Coding bit rate	AAC:48000~320000/AAC+:24000~48000/AAC++:12000~32000/MP3:64000~320000/ MP2: 64000~320000/ AC3:40000~640000/Opus:8000~256000
	Digital volume gain	−50~50
be in common use	network	kilomega

		configuration management	Configuration management through the Web
		ONVIF	Support ONVIF to find and browse videos
		source	12V/DC,3A
		power dissipation	<15W

4K/1080P Live Codec

Low Power Consumption and No Latency

TC-320HN

Video input/video ring out	1 road HDMI
Video coding type	H.264/H.265/MJPEG
Video encoding frame rate	5-60 adjustable
Code flow control	CBR/VBR optional
Pushing	Support RTMP/RTSP/HTTP TS/HTTP FLV/HLS/UDP multicast/RTP multicast
Audio input	1 Built-in audio via RCA HDMI, 13.5mm (Line in)
Audio sampling rate	44100/48000 optional
Audio coding	AAC /AAC+/AAC++/MP3/MP2/ AC3 optional
network	Gigabit network port
configuration management	Configuration management via the Web

TC-920D

Video decoding type	H.265/H.264
Video decoding resolution	Supports up to 2160P@30
Video decoding channels	1 to 4 lanes
Audio decoding type	G711A/G711U/AAC+/AAC++/MP2/MP3
Number of audio decoding channels	Single channel/bidirectional channel
Audio decoding channels	1 Road
output	1 HDMI audio/video output +1 VGA video output +CVBS standard definition video output

TC-920K

Video decoding type	H.265/H.264
Video decoding resolution	Supports up to 2160P@30
Video decoding channels	1 to 4 lanes
Audio decoding type	G711A/G711U/AAC+/AAC++/MP2/MP3
Number of audio decoding channels	Single channel/bidirectional channel
Audio decoding channels	1 Road
output	1 HDMI audio/video output +1 VGA video output +SDI audio/video output

TC-920N2 HDMI

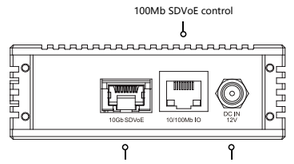
standard agreement	RTMP/RTMPS/RTSP TS/RTSP UDP/HTTP TS/HTTP FLV/UDP/SRT/RTP
Video decoding type	H.265/H.264
Bit rate (kbit)	32-32000
resolution ratio	Supports up to 12160P@60,42160P@30,161080P@60,25720P@25,36720P@25
HDMI1 supports maximum number of channels	Route 16
HDMI2 supports maximum number of channels	Route 16
Maximum number of homogenous outputs for HDMI1 and 2	Route 36
Video output HDMI resolution	3840x2160P60/60/30/25/24 ··· 720x576P60/720x480P60
Audio outputHDMI	48KHz dual channel output
network	kilomega
configuration management	Configuration management through the Web

SDVoE Codec

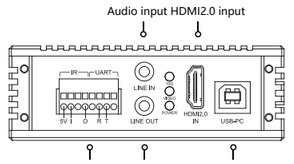
Low latency and no loss transmission / Low latency and lossless transmission

HDMI2.0 to SDVoE-C encoder

Supported video input formats	HDMI 2.0 4096x2160p@60/50fps 4096x2160p@30/25/24fps 3840x2160p@60/50fps 3840x2160p@30/25/24fps 1920×1080p@60/50fps 1920×1080p@30/25/24fps 1920×1080i@60/50fps 1280×720p@60/50fps 1280×1024p@60fps 1280×960p@60fps 1024×768p@60fps 800×600p@60fps 640×480p@60fps 720×480p@60fps 720×576p@50fps 720×480i@60fps 720×576i@50fps
Supported video output formats	RJ45 (converted) Network packets for video transmission
Audio input format	HDMI: 8 Channels, 24-bit, 48KHz 3.5mm telephone jack: 2 Channels, 24-bit, 48KHz
Audio output format	SDVoE: up to 8 Channels, 24-bit, 48KHz 3.5mm telephone jack: 2 Channels, 24-bit, 48KHz
import	Video: HDMI 2.0×1 Audio: 3.5mm telephone jack×1 for L/R audio
output	Already converted video: RJ45×1 (for SDVoE output) Audio: 3.5mm phone jack × 1 for L/R audio
RS232/IR connector	8-pin Phenix connector
Firmware upgrade port	mini USB



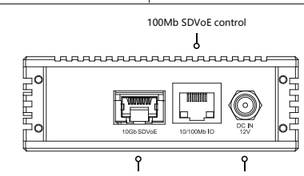
10G RJ45 SDVoE output 12V power interface



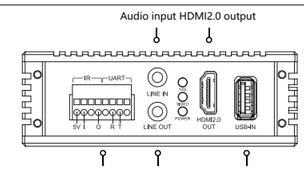
Two-way IR and RS232 audio output USB HID PC connection

SDVoE to HDMI2.0-C decoder

Supported video input formats	RJ45 type network data packets for video transmission
Supported video output formats	HDMI 2.0 (conversion) as the input format
Audio input format	SDVoE: up to 8 Channels, 24-bit, 48KHz 3.5mm phone jack: 2 Channels, 24-bit, 48KHz
Audio output format	HDMI: 8 Channels, 24-bit, 48KHZ 3.5mm phone jack: 2 Channels, 24-bit, 48KHz
import	Video: RJ45×1 (for SDVoE input) Audio: 3.5mm phone jack × 1 for L/R audio
output	Video has been converted: HDMI 2.0x1 Audio: 3.5mm phone jack × 1 for L/R audio
RS232/IR connector	8-pin Phenix connector
Firmware upgrade port	mini USB



10G RJ45 SDVoE output 12V power interface



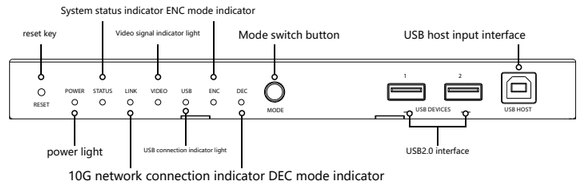
Bidirectional IR and RS232 audio output USB HID device connection

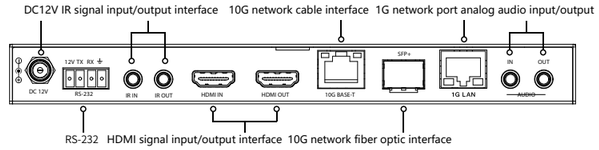
SDVoE Codec

Low latency and no loss transmission / Low latency and lossless transmission

TCHD-SDVoE 100 codec all-in-one machine

functional characteristics	➢ Complies with HDMI 2.0b and HDCP 2.2 specifications ➢ Supports video resolution up to 4K@60Hz 4:4:4,18Gbps video bandwidth ➢ Flexible transceiver design (encoding, decoding, optical port, electrical port share a box) ➢ The encoder/decoder mode can be set using a key or API command ➢ Automatic detection of optical port and electrical port (priority can be configured) ➢ ENC mode supports HDMI ring out ➢ Supports HDR10, Dolby Vision, HLG and 3D ➢ Supports full HDMI audio formats up to Dolby TrueHD, Dolby Atmos, DTS-HD, DTS: X ➢ Supports zero frame delay mode ➢ Support signal extension, seamless switching, matrix, video wall (up to 9x9) and multi-view (up to 25 picture segmentation) functions➢ Flexible audio routing control, support two-way analog audio stereo transmission ➢ Built-in H.264/H.265 auxiliary stream (SS) for real-time screen preview ➢ Supports auxiliary VLAN ID marking and parameter configuration ➢ Support bidirectional IR and RS-232 control signal transmission ➢ Supports USB KVM (USB 2.0 optional) and CEC routing control ➢ Support IR, RS-232, TCP/IP and Web GUI control ➢ Support POE function (802.3at PD device) ➢ 10G managed network switch
HDMI compatible	HDMI 2.0b
HDCP compatible	HDCP 2.2
video bandwidth	18Gbps
input format	10GBaseT
Network video bandwidth	10G
Video resolution	Up to 4k@60Hz 4:4:4
color space	RGB, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color depth	Total color depth
HDR	HDR, HDR 10, DHR10+, Dolby Vision, HLG
HDMI audio format	LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS−EX, DTS−96/24, DTS High Res, DTSHD Master Audio, DSD, DTS:X
Simulated audio format	Left and right stereo analog audio
transmission distance	100m (CAT6A/7 cable)/ 70m (CAT6 cable)



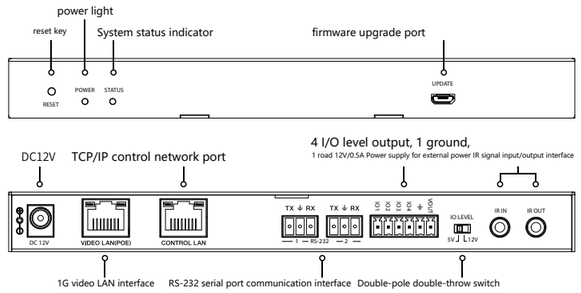


SDVoE Codec

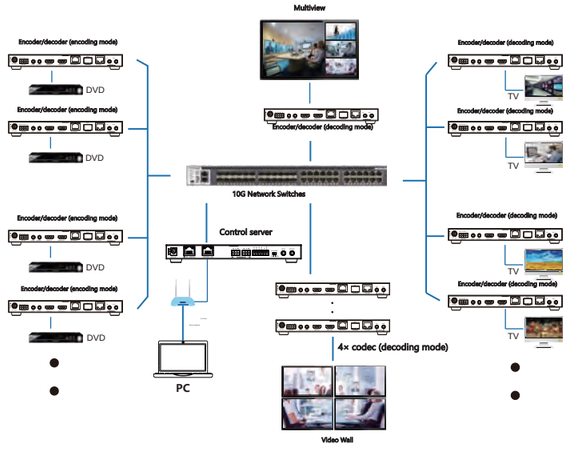
Low latency and no loss transmission / Low latency and lossless transmission

TCHD-SDVoE 100 IP product control server

functional characteristics	➢ Easy to create project, control and management systems ➢ Compatible with HTTPS and SSH security protocols ➢ Built-in Web GUI control interface, support drag and drop operation ➢ Support screen preview ➢ Support for video, audio, RS-232, IR, KVM control and management in distributed systems ➢ Dual 1G network ports (VIDEO LAN interface supports POE) can isolate control and multicast networks➢ Support LAN/RS-232 interface control, can be connected to third-party central control equipment ➢ Supports IR infrared signal reception and loop output (3.5mm audio jack, 12V level) ➢ 4 GPIO control ports (5V/12V optional level) ➢ Multiple circuit protection, lightning strike, static damage ➢ Reliable system design, 7×24 hours reliable and stable work
network bandwidth	100M/1G
transmission distance	100 metres (CAT 5E/6/6A/7)
Control port	2 x 1G LAN [RJ45 interface] [VIDEO LAN support POE] 1 x IR IN [3.5mm audio jack, 12V level] 1 x IR OUT [3.5mm audio jack] 1 x DIGITAL I/O [6-pin 3.81mm Phoenix terminal] 2 x RS-232 [3-pin 3.81mm Phoenix terminal] 1x USB Host [Micro USB, 5−pin female]



Application Topology Diagram



SDVoE Codec

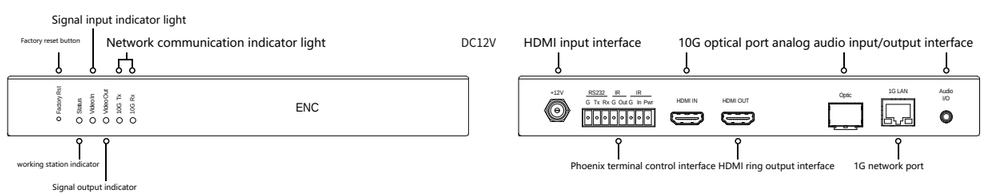
Low latency and no loss transmission / Low latency and lossless transmission

TCHD−SDVoE 201
(encoding)

TCHD−SDVoE 202
(decoding)

functional characteristics	➢ Audio and video signals can be transmitted through optical port; ➢ Use 10GbE network switch to route audio and video, control signals; ➢ Fast and seamless HDMI signal conversion, resolution support for 4K60 (8BIT 4:4:4), and broadcast grade 4K60 (10BIT 4:2:2); ➢ Support HDMI2.0a, HDCP2.2; ➢ Support embedded audio, analog audio, multi-channel PCM audio mixed stereo, two-way IR, RS-232, etc.; ➢ The output terminal has video zoom function, supporting a variety of resolution outputs from VGA to 4K 60; ➢ It has TV wall splicing, picture in picture, picture synthesis and user customization layout functions; ➢ Using single-mode two-core LC fiber, the maximum transmission distance is 10 km; ➢ The interface supports point-to-point, point-to-many, many-to-point, and many-to-many node applications; ➢ Support RS232 routing function; ➢ When the input resolution is 4K60, the data bandwidth of the switch is about 8Gbps, and when it is 1080P60, it is about 3.4Gbps;➢ Supports independent audio input/output and routing functions;
HDMI joggle	TypeA V2.0,HDCP V2.2
Embed audio	Supports HDMI embedded LPCM audio with a sampling frequency up to 24 bits at 192kHz. Support for embedded HBR audio formats: such as Dolby TRUEHD, as well as DTS-HD Master Audio
External audio	3.5MM dual-channel stereo audio input or output
IR control	The 3-pin Phoenix terminal supports two-way IR transmission with 1 IR input and 1 IR output
RS-232 control	The 3-pin phoenix connector supports bidirectional RS-232 transfer up to 115,200 baud
1Gb port	Shield RJ45 and LED indicator
Fiber optic interface	10G 1310 SFP+ 10KM
Maximum resolution support	4096×2160@60Hz 4:4:4
Video signal transmission delay (point-to-point mode)	Maximum 1ms
Exchange delays	Maximum 2 frames
Switch requirements	10Gb bandwidth, no blockage, layer 2 IGMP
Number of supported input/output ports	Limited only by the number of switch ports, cascading is possible
Recommended Fibre	Single mode two core LC
transmission distance	10KM
Matrix exchange mode	The full routing switch from the input node to the output node is determined by the size of the switch and scalability
Video wall splicing mode	Supports up to 64 display devices
Supports up to 64 display devices	Supports point-to-point signal extension using single-mode two-core LC fiber with a maximum distance of 10 km
Frame-slice mode	Supports 32 screens on a separate screen

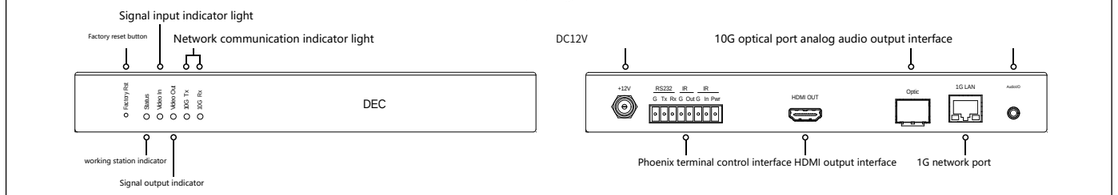
Introduction to TCHD-SDVoE 201 (encoding) interface



SDVoE Codec

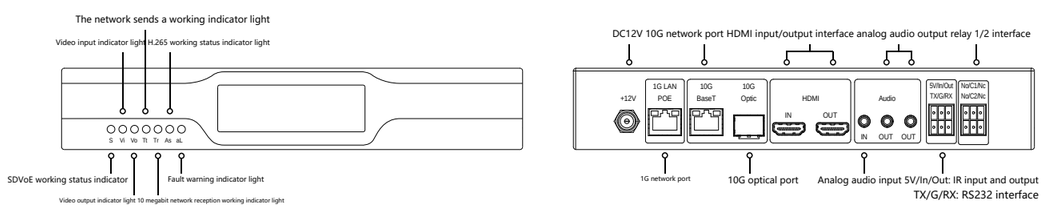
Low latency and no loss transmission / Low latency and lossless transmission

TCHD-SDVoE 202 (decoding) Interface Introduction



TCHD-SDVoE 203 dual code stream codec

functional characteristics	➢ 4K60 4:4:4 lossless ultra high picture quality, 0.1 milliseconds delay; ➢ Multiple bitstream codecs, SDVOE master bitstream, SDVOE scaled bitstream, H.265 master bitstream, H.265 secondary bitstream, H.265 third bitstream; ➢ SDVOE codec is designed to be the same, and H.265 can be selected as encoding or decoding when it comes out; ➢ Use 10GbE network switch to route audio and video, control signals; ➢ Fast and seamless HDMI signal conversion, resolution support for 4K60 (8BIT 4:4:4), and broadcast grade 4K60 (10BIT 4:2:2); ➢ Support embedded audio, analog audio, multi-channel PCM audio mixed stereo, two-way IR, RS-232, relay, etc.;➢ The output terminal has video zoom function, supporting from VGA to 4K60 resolution output; ➢ CAT7 network transmission 100 meters, two-core LC single-mode fiber transmission 10 kilometers; ➢ Supports independent audio input and output routing; ➢ Fiber optic and network double backup transmission mechanism, fault automatic switching; ➢ POE+ and local power supply dual backup mechanism, automatic fault switching; ➢ Signal transmission, distribution, matrix switching, single screen multi-picture, multi-screen splicing functions;
HDMI import	HDMI*1 supports 4K 60hz 4:4:4 resolution
HDMI output	HDMI*1 supports 4K 60hz 4:4:4 resolution
Audio 3.5mm TRS	Simulated audio in x1 0utx2 (SDVOE+H.265)
10G RJ−45	10/100/1000M/10000M CAT7 network cable 100m transmission distance
N. A	SFP+ and 10G LC two-core single-mode fiber, 10km transmission distance
1G RJ−45	10/100/1000M; support POE+ IEEE 802.3at standard
Resolution support	SDVOE: 4K 60hz 4:4:4 resolution H.265:4K 60hz 4:4:4 resolution
Video signal transmission delay	SDVOE: GENLOCK maximum 1ms; H.265:60ms
Audio switching	Switch with video or switch with audio independently
RS−232	Support 115k baud rate (Phoenix terminal)
electric relay	2 Road relays
liquid crystal display	2.23 Inch OLED display
control interface	RS232, IR;



SDVoE Capture Card/decoder

Low latency and no loss transmission / Low latency and lossless transmission

TC-710N1-L SDVoE-C

Maximum resolution	4096×2160p@60/50fps in → 4096×2160p@60/50fps out
host interface	PCIe×4 (Gen2)
video in	1×RJ45 (10G) (HDR Support, RGB/YUV 420/422/444 8/10bits)
Video loop out	1 × HDMI 2.0
Color format	Capture/Preview : 4:4:4 8Bit RGB24 4:4:4 8Bit RGB32 4:2:2 8Bit YUY2 4:2:0 8Bit YV12, NV12 4:2:0 10Bit P010
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

TC-710N1-L SDVoE-F

Maximum resolution	4096×2160p@60/50fps in → 4096×2160p@60/50fps out
host interface	PCIe×4 (Gen2)
video in	1×SFP+ (10G) (HDR Support, RGB/YUV 420/422/444 8/10bits)
Video loop out	1 × HDMI 2.0
Color format	Capture/Preview : 4:4:4 8Bit RGB24 4:4:4 8Bit RGB32 4:2:2 8Bit YUY2 4:2:0 8Bit YV12, NV12 4:2:0 10Bit P010
compressed format	Soft compression H.264
SDK	Support API : DirectShow, V4L2, FFmpeg, Gstreamer Support Language : C++, C#, .NET, Visual Basic, Qt, Delphi
operating system	Windows 7 / 8 / 10 / Linux / 麒麟

SDVoE transmission terminal

HDMI compatible	HDMI 2.0b
HDCP compatible	SDI output* 2,485 control
video bandwidth	18Gbps (594MHz)
Video resolution	Up to 4K2K @60Hz 4:4:4
color space	RGB 4:4:4, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color depth	8/10/12-bit (1080p@60Hz) 8-bit (4K2K@60Hz YUV4:4:4)
HDR	HDR, HDR 10, HDR10+, Dolby vision, HLG
transmission distance	Up to 100 metres (via a single CAT6/6A/7 cable)
Audio format	HDMI: LPCM, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD, DTS-X and ATMOS Simulated audio: PCM2.0CH
electrostatic protection	Human body model: ±8kV (air discharge), ±4kV (contact discharge)
encoder	Input: 1x HDMI [Type A, 19-pin female] 1x 10G BASE-T [RJ45 interface] Output: 1x HDMI [Type A, 19-pin female port] 1x AUDIO IN/OUT [3.5mm L/R] Control: 1x RS-232 [4-pin Phoenix terminal] 1x 1G LAN [RJ45 interface] 1x USB HOST [Type B, 4-pin female port] 1x IR IN [3.5mm L/R] 1x IR OUT [3.5mm L/R]
decoder	Input: 1x 10G BASE-T [RJ45 interface] Output: 1x HDMI [Type A, 19-pin female] 1x AUDIO OUT [3.5mm L/R] Control: 1x RS-232 [4-pin Phoenix terminal] 1x 1G LAN [RJ45 interface] 1x IR IN [3.5mm L/R] 1x IR OUT [3.5mm L/R] 2x USB HID [Type-A, 4pin mother port]

SDVoE Switches

Three-layer network management type full 10 megabit Ethernet switch

TCHD-S8008F (8 optical ports) switch

product description

The TCHD-S800F is a next-generation three-layer full 10G Ethernet switch. Primarily deployed in IP metropolitan networks and internal networks, it meets the demands of carrying various Ethernet services and accessing Ethernet infrastructure. Equipped with comprehensive system software, complete protocols, and applications, this switch facilitates rapid deployment and management of traditional Layer 2 and Layer 3 network services.

The TCHD-S800F utilizes the cutting-edge Realtek chipset, delivering 160 Gbps switching capacity and 119 Mpps forwarding speed with 810 G SFP optical ports. Featuring an energy-efficient external power adapter, it delivers exceptional processing performance and network reliability.

product features

- Cutting-edge Realtek chipset
- Energy-saving external power adapter
- Support QoS, DHCP, BGP, VRRP, QinQ and so on
- Supports WEB/CLI/SNMP/SSH for flexible operation
- Support SSH, ACL, AAA, 802.1X, RADIUS, TACACS+ and other security mechanisms▷ IPv4/IPv6 dual stack for future network expansion

attribute	
network interface	810Gb SFP+
management interface	1 Console port
LED pilot lamp	Power, speed indicator, port connection light
function	
Backplane bandwidth	160 Gbps
Package forwarding rate	119 Mpps
Forwarding patterns	Store and forward
Data packet buffer memory	12 Mbit
CPU internal storage	1 Gbit
Flash Memory	256 Mbit
MAC address table size	16K
physical characteristics	
size (mm)	240 x 104 x 29 mm
working temperature	0 to 40℃
storage temperature	-10 to 70℃
Humidity at work	5 to 95% non-condensable
power supply mode	DC12V input
maximum power dissipation	20W
Management characteristics	
CLI manage	Support serial port management support TELNET management support SSH management
WEB administration of networks	support
SNMP manage	Supports SNMP protocol supports SNMP TRAP supports standard and proprietary MIB
user management	Supports multi-user management
Display CPU utilization	support
Display RAM utilization	support
Log management	support
Configure download/Upload	support
Upgrade firmware	support
Timer management	Support local timer management Support SNTP protocol to obtain clock

SDVoE Switches

Three-layer managed 40G uplink PoE switch

product description

The TCHD-S8024C (24 Electrical Ports) is a high-performance switch featuring 24x10Gb PoE electrical ports and 2 x 40 Gb QSFP+ optical ports. Its 24 network ports support PoE output, enabling efficient power supply for Wi-Fi 6 access points, 4 K IP cameras, and SDVoE HDMI decoders. Equipped with comprehensive system software, full protocol support, and application integration, this switch facilitates rapid deployment and management of traditional Layer 2 and Layer 3 networks.

The TCHD-S8024C (24 ports) uses the most advanced Broadcom BCM56170 chipset to provide 640 Gbps switching capacity and 476 Mpps forwarding rate. It is equipped with redundant hot-swappable power supplies for excellent processing performance and network reliability.

product features

- Cutting-edge Broadcom BCM56170 chipset
- Supports QoS, DHCP, BGP, VRRP, QinQ and other devices.
- Supports WEB/CLI/SNMP/SSH for flexible operation
- Support SSH, ACL, AAA, 802.1X, RADIUS, TACACS+ and so on
- IPv4/IPv6 dual stack, easy for future network expansion

attribute	
network interface	2410G ports 240GQSFP+ ports
management interface	Serial port, management port
LED pilot lamp	Speed indicator, PoE indicator
function	
Backplane bandwidth	640 Gbps
Package forwarding rate	476 Mpps
Forwarding patterns	store-and-forward
Packet forwarding cache	32 Mbit
DDR internal storage	8 Gbit
Flasn memory	512 Mbit
MAC address table size	32K
physical characteristics	
size （mm）	440 × 350 × 44 mm
working temperature	0 to 40℃
storage temperature	-10 to 70℃
Humidity in the work area	5 to 95% non-condensable
power supply mode	100–240VAC, 50/60Hz
maximum power dissipation	Excludes PoE power consumption: 150W
Management characteristics	
CLI manage	Support serial port management support TELNET support SSH
WEB administration of networks	support
SNMP manage	Supports SNMP protocol supports SNMP TRAP supports standard and private MIB
user management	Supports multi-user management
Display CPU utilization	support
Display RAM utilization	support
Log management	support
Configure download/upload	support
Upgrade firmware	support
Timer management	Support local timer management Support SNTP protocol to obtain clock

TCHD-S8024C (24 ports) switch

SDVoE Switches

A three-tier 40G uplink port managed Ethernet switch

The TCHD-S8024F (24 ports) is a high-performance switch with 24x10Gb SFP+ and 2x40Gb QSFP+ ports, which makes it ideal for spinal architecture.The switch is equipped with complete system software, comprehensive protocols and applications to facilitate rapid service deployment and management of traditional Layer 2 and Layer 3 networks.

Using the cutting-edge Broadcom BCM56170 chipset, it provides 640 Gbps switching capacity and 476 Mpps forwarding rate. It is equipped with redundant hot-swappable power supplies for superior processing performance and network reliability.

- Cutting-edge Broadcom BCM56170 chipset
- 1+1 hot plug-in power supply
- Support QoS, DHCP, BGP, VRRP, QinQ and other protocols
- Supports WEB/CLI/SNMP/SSH for flexible operation
- Support SSH, ACL, AAA, 802.1X, RADIUS, TACACS+ and so on
- IPv4/IPv6 dual stack, easy for future network expansion

attribute	
network interface	24 × 10Gb SFP+ 2 × 40Gb QSFP+
management interface	Console, management port
LED pilot lamp	Power, system, Link/Act
function	
Backplane bandwidth	640 Gbps
Package forwarding rate	476 Mpps
Forwarding patterns	store-and-forward
Packet forwarding cache	32 Mbit
DDR internal storage	8 Gbit
Flasn memory	512 Mbit
MAC address table size	32K
physical characteristics	
size （mm）	440 × 460 × 44 mm
working temperature	0 to 40℃
storage temperature	-10 to 70℃
Humidity at work	5 to 95% non-condensable
power supply mode	100-240VAC, 50/60Hz or 36-72VDC (depending on PSU)
maximum power dissipation	150W
reliability	1+1 hot plug-in power supply
Management characteristics	
CLI manage	Support serial port management support TELNET support SSH
WEB administration of networks	support
SNMP manage	Supports SNMP protocol supports SNMP traps supports standard and proprietary MIB
user management	Supports multi-user management
Display CPU utilization	support
Display RAM utilization	support
Log management	support
Configure download/Upload	support
Upgrade firmware	support
Timer management	Support local timer management and support SNTP protocol to obtain clock

TCHD-S8024F (24 optical ports) switch

4K/1080P 3D Video Converter

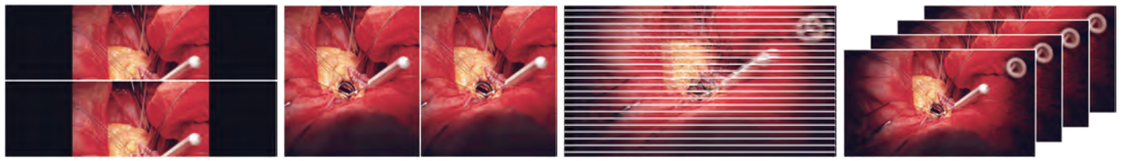
3D format conversion and 2D to 3D conversion

2×12G-SDI/HDMI2.0 to 12G-SDI/HDMI2.0 3D video converter 2×SDI/HDMI to SDI/HDMI 3D video converter

Tianchuang Hengda's 3D video converter supports 3D video conversion at up to 4K@60fps, ensuring crystal-clear picture quality and smooth playback during the process. Its outstanding performance delivers more realistic conversion results with higher efficiency, opening up new possibilities for multiple industries.

The Tianchuang Hengda 3D Video Converter offers versatile input/output format support. Its dual 2×12G-SDI/HDMI2.0 to 12G-SDI/HDMI2.0 model enables 2D/3D video conversion for 12G-SDI/HDMI2.0 inputs, supporting dual-channel 2D/3D 12G-SDI/HDMI2.0 connections that deliver 4K@60fps video output through 12G-SDI/HDMI 2.0. The dual SDI/HDMI to SDI/HDMI model supports up to 1080 P@60fps resolution, accommodating various SDI/HDMI formats and input requirements. These comprehensive input/output compatibility features allow the Tianchuang Hengda 3D Video Converter to adapt to diverse application scenarios and meet users' varied needs.

3D *2D* *4K* *1080P* *12G-SDI* *3G-SDI* *HDMI 2.0* *HDMI*



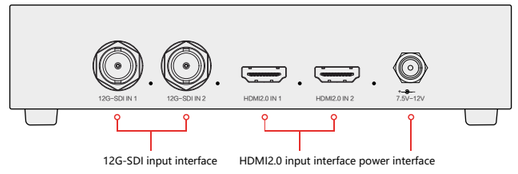
Top & Bottom Side by Side Line by Line Frame Sequential

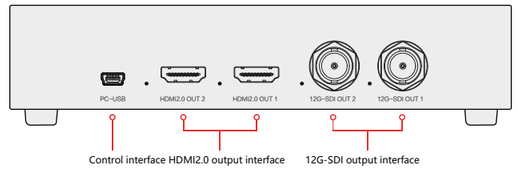
3D Conversion			Output Mode				
			1 × 3D Video				2 × 2D Video
			Line by Line	Side by Side	Top & Bottom	Frame Sequential	Left & Right
Input Mode	1 × 3D Video	Line by Line		●	●	●	●
		Side by Side	●		●	●	●
		Top & Bottom	●	●		●	●
		Frame Sequential	●	●	●		●
		12G-SDI/3G-SDI Level B Dual-stream	●	●	●	●	●
	2 × 2D Video	Left & Right	●	●	●	●	

4K 3D Video Converter

3D format conversion and 2D to 3D conversion

2×12G-SDI/HDMI2.0 to 12G-SDI/HDMI2.0 3D video converter





Specifications Parameters

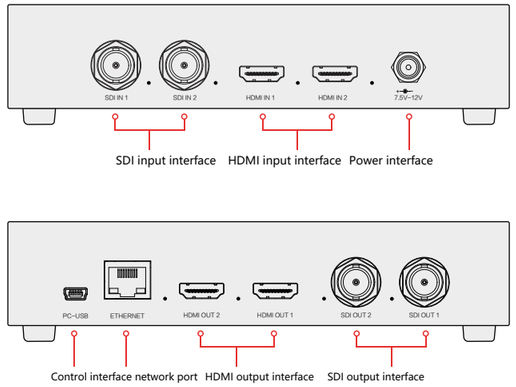
description	2×12G-SDI/HDMI2.0 to 2×12G-SDI and 2×HDMI2.0 Up/Down Converter with 3D Support
feature	• Side by Side, Top and Bottom, Line by Line 3D Mode and Frame Sequential Support • Two 2D Video Convert to One 3D Video Support One 3D • Video Convert to Two 2D Video Support I ← P Conversion • (Built-In Interlacer and DeInterlacer) 60fps ← 59.94fps • Conversion • Frame Rate and Format Up/Down Conversion
Input interface	Video • HDMI2.0×2 (2D / 3D) • 12G-SDI×2 (2D / 3D)
output interface	Converted Video • HDMI2.0×2 (2D / 3D) • 12G-SDI×2 (2D / 3D)
input format	SDI 12G-SDI 4096x2160p@60/50fps 6G-SDI 4096x2160p@30/25/24fps 3G-SDI 1920×1080p@60/50fps HD-SDI 1920×1080p@30/25/24fps 1280×720p@60/50fps 3840x2160p@60/50fps 3840x2160p@30/25/24fps 1920×1080i@60/50fps (*) HDMI 2.0 4096x2160p@60/50fps 3840x2160p@60/50fps 4096x2160p@30/25/24fps 3840x2160p@30/25/24fps
output format	1920×1080p@60/50fps 1920×1080p@30/25/24fps 1920×1080i@60/50fps (*) 1280×720p@60/50fps *: Interlaced input video is not supported for frame sequential output mode
	SDI (Up/Down Converted) **12G-SDI** 4096x2160p@60/50fps 3840x2160p@60/50fps **6G-SDI** 4096x2160p@30/25/24fps 3840x2160p@30/25/24fps **3G-SDI** 1920×1080p@60/50fps **HD-SDI** 1920×1080p@30/25/24fps 1280×720p@60/50fps **HDMI 2.0 (Up/Down Converted)** 4096x2160p@60/50fps 4096x2160p@30/25/24fps 3840x2160p@60/50fps 3840x2160p@30/25/24fps 1920×1080p@60/50fps 1920×1080p@30/25/24fps 1280×720p@60/50fps
Audio input	SDI : Up to 8 Channels, 24bit, 48KHz HDMI : Up to 8 Channels, 24bit, 192KHz
Audio output	HDMI (DVI-D) /SDI : Up to 8 Channels, 24bit, 48KHz 3.5 mm Phone Jack : 2 Channels, 24bit, 48KHz
plug and play	√
source	7.5V ~ 15V
size	L:171mm×W:103mm×H:35.1mm

1080P 3D Video Converter

3D format conversion and 2D to 3D conversion / 3D format conversion and 2D to 3D conversion

1080P FULL HD

2×SDI/HDMIto SDI/HDMI 3D video converter



Specifications Parameters

descript-ion	2 ×SDI/HDMI to 2 ×SDI and 2 × HDMI Up/Down Converter with 3D Support
feature	• Side by Side, Top and Bottom, Line by Line 3D Mode and Frame Sequential Support • Two 2D Video Convert to One 3D Video Support One 3D • Video Convert to Two 2D Video Support I ← P Conversion • (Built-In Interlacer and DeInterlacer) 60fps ← 59.94fps • Conversion • Frame Rate and Format Up/Down Conversion
Input interface	Video • HDMI × 2 (2D / 3D) • SDI × 2 (2D / 3D)
output interface	Converted Video • HDMI × 2 (2D / 3D) • SDI × 2 (2D / 3D)
input format	SDI 3G-SDI 1920 × 1080p@60/50fps HD-SDI 1920 × 1080p@30/25/24fps 1920 × 1080i@60/50fps 1280 × 720p@60/50fps SD-SDI 720 × 480i@60fps 720 × 576i@50fps HDMI 1920 × 1080p@60/50fps 1920 × 1080p@30/25/24fps 1920 × 1080i@60/50fps 1280 × 720p@60/50fps 1280 × 1024p@60fps 1280 × 960p@60fps
	1024 × 768p@60fps 800 × 600p@60fps 640 × 480p@60fps 720 × 480p@60fps 720 × 576p@50fps 720 × 480i@60fps 720 × 576i@50fps
output format	**SDI (Up/Down Converted)** **3G-SDI** 1920 × 1080p@60/50fps **HD-SDI** 1920 × 1080p@30/25/24fps 1920 × 1080i@60/50fps 1280 × 720p@60/50fps **HDMI (Up/Down Converted)** 1920 × 1080p@60/50fps 1920 × 1080p@30/25/24fps 1920 × 1080i@60/50fps 1280 × 720p@60/50fps
Audio input	HDMI : 2 Channels, 24bit, 192KHz SDI : 2 Channels, 24bit, 192KHz
Audio output	HDMI : 2 Channels, 24bit, 192KHz SDI : 2 Channels, 24bit, 192KHz
plug and play	√
source	7.5V ~ 15V
size	L:171mm × W:103mm × H:35.1mm

4K Bidirectional Video Converter

12G-SDI HDMI2.0 bidirectional conversion / 12G-SDI HDMI2.0 bidirectional conversion

4K ULTRA HD

TC-160HS 12G-SDI HDMI2.0 bidirectional video converter

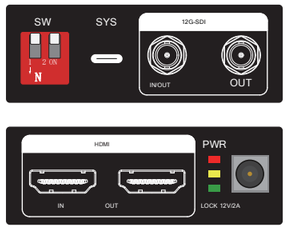
The TC-160HS 12G-SDI HDMI2.0 two-way converter connects 12G-SDI signals to Ultra HD HDMI 4K devices, making it an ideal solution for broadcast-grade cameras to convert 12G-SDI signals into HDMI signals!

It can be widely used in various scenarios such as radio and television industry, medical industry, military industry, commercial display industry and so on. The product is a full hardware architecture with high stability, high reliability and high ease of use characteristics.

Function Introduction

- 12G-SDI to 12G-SDI (circular output signal, support 2160P,10810P,1080I,720P)
- 12G-SDI to HDMI2.0 (conversion signal, support 2160P,10810P,1080I,720P)
- HDMI2.0 to 12G-SDI (conversion signal, support 2160P,10810P,1080I,720P)
- HDMI2.0 to HDMI2.0 (looped output signal, support 2160P,10810P,1080I,720P)

Interface Specification



DC	Power interface	12V/2A	
POW	power light	red lantern	Lighting the lamp indicates normal power supply
MODE	Mode status light	yellow light	Light up the lamp to select the SDI input mode
LOCK	Signal status light	green light	Light up means the input signal is normal
SYS	Upgrade interface	Type-C	Update and upgrade the device program
SW		HDMI-IN	HDMI input → SDI output +HDMI loop out
		SDI-IN	SDI input → HDMI output +SDI loop out
		RST	Reset the device after program upgrade

✧ Usage: After switching the signal source with the DIP switch, the device needs to be restarted.

Specifications Parameters

video in	12G-SDI x 1 or HDMI 2.0 x 1
junctor	BNC complies with IEC169-8 standard
impedance	75Ω
code check	1.5Gbps~12Gbps
UHD video format	3840x2160p: 60/59.94/50/30/29.97/25/24/23.98
video monitor 525 vidicon video out	12G-SDI x 1 or HDMI 2.0 x 1
Export of the loop	12G-SDI x 1 or HDMI 2.0 x 1
Output signal amplitude	800mV ± 10%(100Ω)
impedance	100Ω
format conversion	UHD change
SDI standard	SMPTE 292M, SMPTE 259M, SMPTE 296M, SMPTE 372M, SMPTE 424M-B and SMPTE 425M, SMPTEST-2081
Audio input	Embed audio
SDI video sampling	4: 2: 2 and 4: 4: 4
SDI audio sampling	TV standard sampling rate 48kHz, 24bit
SDI color accuracy	4: 2: 2 and 4: 4: 4

SDI color space SDI automatic switching	TV standard sampling rate 48kHz, 24-bit. Automatic detection of HD and 12G-SDI
HDMI video format	525i29.97 NTSC、625i25 PAL、720p50、720p 59.94、720p60、1080p23.98、1080p24、 1080p 25、1080p29.97、1080p30、1080p50、1080p 59.94、1080p60、1080i50、1080i59.94、1080i60 2160p23.98、2160p24、2160p25、 2160p29.97、2160p30、4K DCI 2160p24
HDMI color space	YUV and RGB
HDMI color precision software control	4: 2: 2 and 4: 4: 4
Set the control power supply	Upgrade a small DIP switch via the RJ45 port on an Mac OS or Windows computer
weight	DC 12V 3A
environmental specification	0.7KG
	Operating temperature 0° to 40° C (32° to 104° F) relative temperature 0% to 90% no condensation Storage temperature-20° to 45° C (-4° to 113° F)

4K Bidirectional Video Converter

HD to 4K,4K to HD signal bidirectional conversion

4K ULTRA HD

TC-150H HD to 4K HDMI Bidirectional Video Converter

Function Introduction

- Designed with FPGA, it supports bidirectional conversion between 2K→4K and 4K→2K signals
- Professional UHD-HD down conversion to output
- Professional HD-UHD on变换转换输出
- Professional audio deinterlace/insertion conversion
- Professional DSP image acceleration processing, the image is processed with contour correction and anti-flicker technology, the converted image is clear
- Low latency and high quality
- The device has a full hardware architecture and compact internal structure design combined with portable design to facilitate mobile deployment
- The device is highly stable, highly reliable, and easy to use. It requires no complex configuration or driver installation to achieve plug and play

Interface Specification

joggle	explain	Specifications
DC	Power interface	Support 12V/2A
PWR	power light	The red light is on, indicating normal power supply
LOCK	Signal status light	The green light is on, indicating that the input signal is normal
HDMI IN	Signal input interface	Input interface supports signal formats 4096×2160p@60/59/50/30/29/25/24/23fps/DCI 1920×1080p@60/59/50/30/29/25/24/23fps/DCI
HDMI LOOP	Signal ring interface	The interface supports signal formats including 4096×2160p @ 60/59/50/30/29/25/24/23 fps/DCI and 1920×1080p @60/59/50/30/29/25/24/23 fps/DCI.
DBG	Upgrade interface	Type C, the interface that will be used only when the device program is updated and upgraded
MIC	Analog audio input interface	Interface size: 3.5mm When using, please press the dial 2 to take effect
PHONE	Audio output interface	Interface size: 3.5mm plug and play
HDMI OUT	Signal output interface	The output interface supports signal formats: 4096×2160p @ 60/59/50/30/29/25/24/23 fps/DCI and 1920×1080p @60/59/50/30/29/25/24/23 fps/DCI
232	Debug serial port	Professional debugging and use
SW		HDMI-IN input UHD/HD, HDMI output original signal UHD/HD
		The HDMI-IN input HD is professionally processed and converted by the device, and the HDMI-OUT output is converted to UHD picture
		The HDMI-IN input is UHD, which is converted by professional equipment processing, and the HDMI-OUT output changes the HD picture
		RST, the device is reset after program upgrade. Please use it carefully

Specifications parameters

video in	HDMI 2.0*1
impedance	75Ω
code check	1.5Gbps~12Gbps
UHD video format	4096*2160p @60/59.94/50/30/29.97/25/24/23.98/60 DCI/59.94 DCI/50 DCI/30 DCI/29.97 DCI/25 DCI/24 DCI/23.98 DCI
HD video format	1920*1080p @60/59.94/50/30/29.97/25/24/23.98/60 DCI/59.94 DCI/50 DCI/30 DCI/29.97 DCI/25 DCI/24 DCI/23.98 DCI
video monitor 525 vidicon video out	HDMI 2.0*1
Export of the loop	HDMI 2.0*1
Output signal amplitude	800mV ± 10%(100Ω)
impedance	100Ω
format conversion	HD→UHD conversion,UHD→HD conversion
automatic switchover	Automatic detection HD, UHD
Audio input	HDMI embedded audio 3.5mm*1, MIC analog audio input (press SW to pull code 2)
Audio output	HDMI embedded audio 3.5mm*1, PHONE audio output (plug and play)
Video sampling	4: 2: 2 and 4: 4: 4
Audio sampling	TV standard sampling rate 48khz, 24bit
Color accuracy	4:2:2 and 4:4:4
Color space	YUV and RGB
Signal indications	PWR power indicator light LOCK signal indicator light
software control	Upgrade software by connecting to the PC via the Type-C line of theDBG interface
Setting controls	SW Small code switch adjustment
source	DC 12V/2A

1080P Video Converter

Easy conversion of broadcast grade SDI/HDMI signals

1080P FULL HD

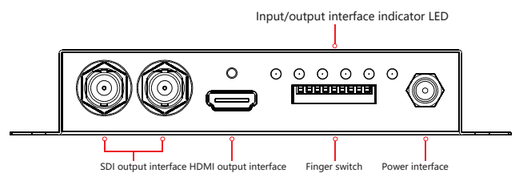
TC-Multi to SDI/HDMI high-definition video converter

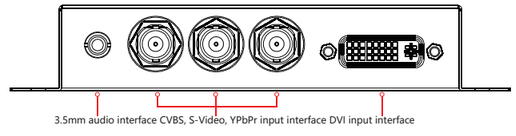
Supports the conversion of multiple signals (DVI, YPbPr, CVBS, etc.) to HD HDMI and SDI signals for output, supports signal up/down conversion, integrates DVI/HDMI/VGA/YPbPr/CVBS receiver and SDI modulator, can conveniently convert multiple signals into SDI/HDMI signals, supports 3G/HD/SD-SDI and HDMI output.

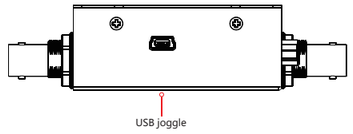
major function

- Diverse input options
- Diverse up/down/interchangeable converters
- 4:3/16:9 screen ratio conversion
- area-of-interest
- Convert analog/DVI signals to SDI/HDMI
- Convert to SDI and HDMI output
- 2 A converted SDI output

interface specification







Specifications parameters

SDI form	SD-SDI, HD-SDI & 3G-SDI
SDI transmission rate	2.970Gb/s, 10485Gb/s, 270Mb/s
Audio source format	HDMI (DVI-D): 8-channel L/R Audio: a.2 Sound channel allocation to 8 channels (when HDMI/SDI output) b. Input impedance = 10K. c. Input extreme value (Vrms) = 10dBV (9V p-p), or 3.16 Vrms.
The converted sound format coaxial cable	Automatic sampling up to 48Khz RG6/RG59 (75Ω)
Cable balancing	3G: RG6 can transmit 100m /RG59 can transmit 86m HD: RG6 can transmit 170m / RG59 can transmit 120m SD: RG6 can transmit 400m / RG59 can transmit 280m *1 RG6: CANARE L-5CFB / RG59: Belden 9275 *2 Signal transmission distance: varies according to SDI signal quality and wire quality
Input signal source	HDMI/VGA/YPbPr/CVBS/S-Video
The output signal source supports the input format	2 x SDI + 1 x HDMI (simultaneous output) 1920 × 1080P@60Hz downward compatibility
Supports the output format update interface BNC interface specification	1920 × 1080P@60/59.94/50/30/25/24Hz downward compatible Mini-USB
	3G 75 Ω interlocked interface Mini-USB
USB interface specification refers to the toggle switch	Used to control input source/output format SECC
Operating temperature of the housing power supply	AC 100 ~ 240 V/DC (+9 ~ 15 V)
	0~50° C [32~114° F]
storage temperature	−20~+60° C

1080P Video Converter

Easy conversion of broadcast grade SDI/HDMI signals

1080P FULL HD

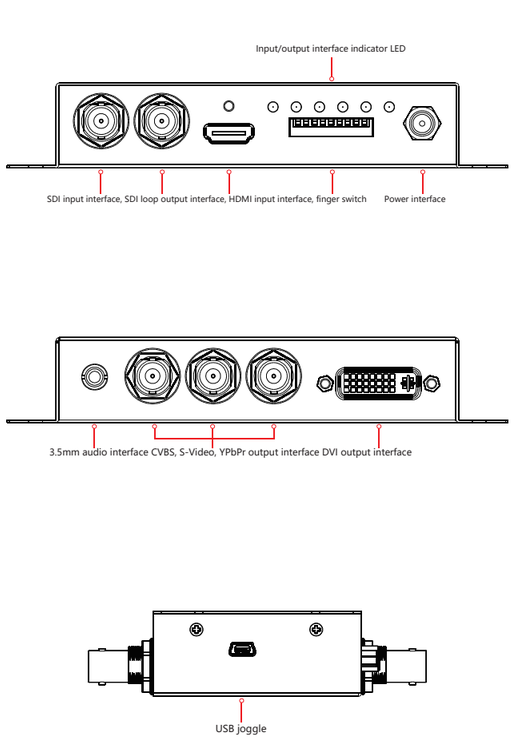
TC-SDI/HDMI to Multi HD video converter

The SDI/HDMI to Multi HD converter enables conversion of SDI/HDMI signals into HD and SDI audio-video outputs. It supports signal resolution and refresh rate adjustments, featuring an integrated SDI receiver with DVI/HDMI/VGA/YPbPr/CVBS modulators. This versatile device converts SDI/HDMI signals into multiple formats including SDI loop output and supports analog/DVI/video outputs.

Major Function

- SDI supports HD formats: 720p50&60/1080i50&60/1080p24,25,30,50&60
- SDI support for 525i & 625i SD D1 format
- Automatic 3G/HD/SD-SDI detection
- You can split a 3G-SDI display at the same time
- Frame conversion (1.000/1.001)
- External DipSwitch and USB configuration
- Converters are plug and play
- The firmware can be upgraded on site through the integrated USB port
- Supports DVI-D, DVI-A, component, CVBS and S-Video outputs
- Supports stereo audio (L/R audio) output

interface specification



Specifications parameters

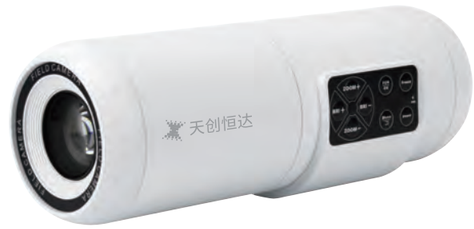
incoming signal	Video: ➢ HDMI × 1 ➢ SDI × 1
output signal	Up/Down Converted Video ➢ DVI-I × 1 ➢ BNC × 3 for Component/S-Video/Composite Loop-Through Video ➢ SDI × 1 Audio ➢ 3.5mm Phone Jack × 1 for L/R Audio
Input resolution	HDMI 1920 × 1080p@60/50/30/25/24fps 1920 × 1080i@60/50fps … 720 × 576i@50fps SDI 3G-SDI 1920 × 1080p@60/50fps HD-SDI 1920 × 1080p@30/25/24fps 1920 × 1080i@60/50fps 1280 × 720p@60/50fps SD-SDI 720 × 480i@60fps 720 × 576i@50fps
Output resolution	**DVI-I (Up/Down Converted)** 1920 × 1080p@60/50/30/25/24fps 1920 × 1080i@60/50fps … 720 × 576i@50fps **Composite/S-Video (Up/Down Converted)** NTSC/PAL **Component (Up/Down Converted)** 480i, 576i, 480p, 576p, 720p, 1080i, 1080p **SDI (Loop-Through)** As Input SDI Format
Audio input format	SDI : Up to 8 Channels, 24bit, 48KHz HDMI : Up to 8 Channels, 24bit, 192KHz
Audio output format	HDMI (DVI-D) /SDI : Up to 8 Channels, 24bit, 48KHz 3.5 mm Phone Jack : 2 Channels, 24bit, 48KHz

1080P Parafield Camera

Surgical live streaming and recording, remote teaching and medical training / Surgical live streaming and recording, remote teaching and medical training

1080P FULL HD

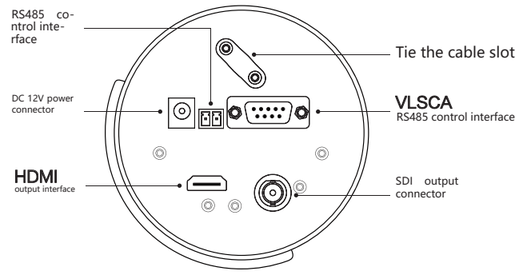
TCHD-MD30HS Side Field Camera



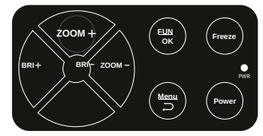
The TCHD-MD30HS surgical field camera features comprehensive functionality, exceptional performance, and diverse interfaces. It incorporates a built-in 1/2.8-type "Exmor" CMOS sensor with a total of 2.38 million pixels. The integrated design combines dust-resistant, easy-to-clean, and streamlined aesthetics. This versatile device is ideal for live surgery broadcasts, recordings, remote teaching, and medical training across various healthcare scenarios.

SONY sensor · Optical zoom · SDI+HDMI · Frame freeze · Level of medical care · telecontrol · HD picture quality

Interface Specification



Operation Interface



Menu	Resolution, digital zoom, sharpness, white balance, color gain, contrast, factory reset	Power	The power button and the power indicator light zoom out
FUN\OK	Short press to change from manual brightness adjustment to automatic brightness Use the menu as a confirmation button	PWR	
Freeze	Frame freeze Press to freeze the screen and press again to restore it	ZOOM +	
		ZOOM -	Zoom in
		BRI +	brightness control +
		BRI -	brightness control -

functional characteristics

- The integrated design of high-definition surgical field camera adopts dust-free, easy to clean and streamlined design. It is suitable for live surgery broadcast and recording, remote teaching and medical training in various medical scenarios;
- Metal shell design, convenient for every cleaning and disinfection;
- Comfortable and noiseless, it can be flexibly configured on all kinds of crane arms to achieve all-round shooting angles;
- Medical-grade operating field camera core, 30 times optical lens, output 3G-SDI or HDMI 1080 HD image, support up to 60 frames;
- One-click manual and fast switch between automatic and manual focus, which can still present true color restoration under the high color temperature medical phantasm lamp, combined with manual conditional strong light suppression function;
- Support normal mode and shadowless lamp mode, enhance brightness adjustment, adjust the image brightness function in different shadowless lamp state, under different lighting conditions;
- Conventional general wire can ensure smooth, stable and anti-interference image transmission;
- The intuitive and simple OSD operation interface, combined with the multi-functional control button panel, can easily adjust focus, zoom, brightness adjustment freeze and other common functions.

Specifications parameters

sensor	Built-in 1/2.8-type "Exmor" CMOS sensor, total pixels up to 2.38 million, resolution up to 1920*1080P, can output FHD 1080P60 real-time images
Lens / Digital zoom	Supports HD signals, 30x optical zoom, 12x digital
Focal length aperture view	zoom f=4.3mm (wide end) to 129.0mm (long end) F1.6 to F4.7 automatic/manual 63.7 Angle (wide-angle end) to 2.3 degrees (long-end)
Video output interface	Support HD-SDI or HDMI interface output, Supported formats: 1080P60/P59.94/P50/P30/P25 frames, 720P60/P59.94/P50/P30/P25
control protocol	Equipped with RS485 and RS232 interfaces, supports SONY VISCA protocol, baud rate 9600
White balance focus control signal to noise ratio	ATW/Automatic Tracking White Balance/Automatic White Balance/ Manual White Balance/Indoor/Outdoor On/Off (Automatic/Manual) Greater than 50dB
Key panel function physical interface	Zoom in/out, Menu toggle, Brightness +/-, Modes, Freeze HDMI 2.0, 3G HD-SDI

4K Field Camera

Surgical live streaming and recording, remote teaching and medical training / Surgical live streaming and recording, remote teaching and medical training

4K ULTRA HD

TCHD-MD20-4K surgical field camera

The 4K Operating Field Camera TCHD-MD20HS is a medical-grade device specifically designed for telemedicine, surgical demonstration, live and recorded broadcasts. Featuring an 8.5-megapixel Sony COMS image sensor, it delivers exceptional 4K imaging with high detail retention and low noise levels. With 20x optical zoom and 12x digital zoom capabilities, the camera provides magnified views to capture intricate surgical details. The HDMI output supports 4K@30fps video streaming, making it ideal for simultaneous use with 4K monitors and recording systems.

SONY Sensor Optical zoom HDMI output Frame freeze Level of medical care Remote control 4K picture quality

operation interface

amplify	Image zoom (menu function switch)
Dim the brightness	Image zoom in (menu function switch)
	Increase brightness according to the light source brightness (switching menu function parameters)
Dim the menu lights	Reduce brightness according to the light source (switching menu function parameters)
	Long press for three seconds to bring up the menu, click Freeze / Thaw
	Long bright red, indicating the working status of the camera; light gray, indicating the working stop of the camera

Interface Specification

HDMI output interface 2.54 SM plug-in

Specifications parameters

imaging sensor	1/2.5 Exmor R CMOS (approximately 8.51 megapixels)
Number of output pixels	3840 × 2160 (QFHD)
Image format	2106P29.97 / 2160P25 / 2160P23.98 / 1080P59.94 1080P50 / 1080I59.94 / 1080I50 / 1080P29.97 / 1080P25 1080P23.98 / 720P59.94 / 720P50
System synchronization	inter-sync
Super resolution zoom	4K 1.5x 1080P 2.0x
function	It has the functions of day and night switching, anti-shake, fog penetration, wide dynamic range and high bright spot suppression
Frame effects	(Vertical/Horizontal) Flip, Black and White Video Output (HD): HDMI
Magnification of the lens	20 Bifocal zoom
Digital zoom	12 Multiplicative digital zoom
camera lens	4.4 mm (f= wide) ~ 88.4 mm (tele), F 2.0~F 3.8
Minimum object distance	10mm (wide-angle end) to 1500mm (long-end) (default: 300mm)
Frame effects	(Vertical/horizontal) flip, black and white
output format	HDMI/ aviation plug (2-core power, 2-core (default 1 RS485) 1-HDMI)
source	DC 12V
power dissipation	15 W

Function Introduction

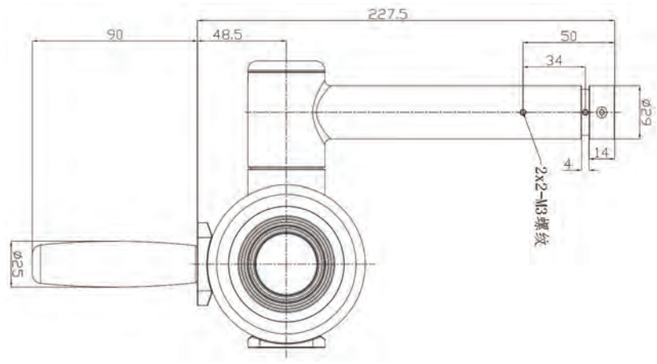
- The 4K surgical field camera adopts the integrated design with the cantilever system, which is ergonomic, dust-free, dust-free and easy to clean. It is suitable for live surgery and recording, remote teaching and medical training;
- Flexible connector and rotating part design, comfortable hand feel without noise, to achieve horizontal 360 degrees and vertical 90 degrees all-round shooting;
- Professional 4K SONY mechanism, 20 times optical lens, output 4K 2160P high-definition image, up to 30 frames, provide high definition, high picture quality and high sensitivity of video shooting function;
- Automatic fast and accurate focus, true color restoration under high color temperature, automatic strong light suppression function;
- Support the mode switching function of medical, improve the halo problem, support manual brightness enhancement adjustment, adjust the image brightness under different shadowless lamp illumination, and improve the halo problem;
- Friendly simple operation interface, ultra-thin multi-functional control button panel, convenient zoom, brightness add/submission, menu, freeze common function control. You can set the camera advanced parameters through the menu;
- Product interface: HDMI/ aviation head (2 power 12V2A,2 cores (default 1 RS485) 1 road HDMI) ;
- Support the remote control to operate the camera zoom, brightness increase and decrease, menu and freeze functions, support serial port call the camera various functions.

4K Field Camera

Surgical live streaming and recording, remote teaching and medical training / Surgical live streaming and recording, remote teaching and medical training

4K ULTRA HD

TCHD-MD20-4KH operating field camera



Function Introduction

- Real HD images

  Using a high quality "Exmor R" CMOS Sensor with 1/2.5 inch, 8.51 million effective pixels, it can achieve high quality images with 3840×2160 ultra-high resolution. While ensuring ultra-high definition, it focuses on meeting the needs of smooth picture.

- Low noise and high signal to noise ratio

  The 2D and motion-based 3D noise reduction algorithms are applied, and the new generation of low-noise sensors are used to effectively reduce the noise.

- 20x optical zoom 12x digital zoom

  Fast, accurate and stable autofocus lens, can achieve 20 times optical zoom.

- 4K HD HDMI video output

  Supports 3840×2160P30/25,1080P60/50/30/25,1080I60/50,720P 60/50 and other HD video formats.

- 255 position preset positions

  The 255 positions can be preset through the serial port, including zoom preset. Even when the camera is powered off and closed, the preset data can be saved.

Support 232 485 Controls

Multi-functional remote control

Equipped with a simple remote control, in addition to basic Settings, zoom control, etc., the remote control can also be used to call up the menu to set the relevant parameters of the camera.

- OSD English menu function

  Rich OSD menu, available with remote control to control the English OSD menu.

Specifications parameters

signal system	3840×2160P30/25,1080P60/50/30/25 、1080I/60/50、720P60/50
sensor	1/2.5 inch high quality CMOS sensor 16:98.51 million effective pixels
scanning mode	non interlaced
camera lens	20X,F1.6～F3.5,f=4.4mm～88.4mm 12x digital zoom
Digital zoom	12X
minimal illumination	Supports ultra low illumination: 0.1Lux@F1.6 (color), 0.01Lux@F1.6 (black and white)
shutter	1/1s ~ 1/10000s
white balance	Automatic, Indoor, Outdoor, Manual
Backlight compensation	support
Digital noise reduction	2D&3D digital noise reduction
noise-signal ratio	⩾52dB
Horizontal field of view	70.2° (wide end) ~ 4.1° (long end)
Number of preset bits	255
Precision of preset positions	±0.1°
HDMI1.4	Supports up to 3840×2160P30
RS485	1 Road, RS-485, maximum distance: 120 m, VISCA/Pelco-D/ Pelco-P protocol
input voltage	AC110V-AC220V to DC12V/3A
working temperature	0℃ to +45℃
Storage temperature	-10℃ to +60℃
power dissipation	24W (maximum)

4K Field Camera

Surgical live streaming and recording, remote teaching and medical training / Surgical live streaming and recording, remote teaching and medical training

4K ULTRA HD

TCHD-MD25-4K surgical field camera

TCHD-MD25-4K is a 4K, medical-grade camera that can be mounted on a cantilever and is designed for the operating room.

The TCHD-MD25-4K surgical field camera utilizes Sony's COMS image sensor to deliver exceptional 4K imaging with outstanding detail retention and minimal noise. Featuring 12x,18x, or 25x non-linear optical zoom capabilities, it enables magnification for capturing detailed close-up views of complex surgical procedures. The device supports simultaneous 4K video output via both HDMI and 3G-SDI interfaces, making it ideal for dual connectivity to 4K monitors and recorders.

SONY Sensor Optical Zoom SDI+HDMI NDI Frame freeze medical grade Remote control 4K picture quality

Functional Characteristics

- 4K video with clear details and low noise
- ND filter and auto-exposure mode
- Optimized design suitable for suspension rod installation
- High quality optical zoom lens
- 4K HDMI and 3G-SDI simultaneous output
- Wipe design, more hygienic
- RS232/485/422 PELCO/VISCA, IP VISCA remote control Direct independent streaming to CDN, no computer required.
- Up to 4K30 hardware video encoder
- H.264 HP/MP/BP or H.265/HEVC MP codecs Supports NDI ® | HX3, better quality and minimal delay
- Powerful NDI encoding or NDI decoding capabilities
- Bit rate up to 50mbps, high bandwidth video streams can achieve the best quality Adaptive AAC audio for embedded and analog audio Transfer live video to computers, phones and iPads
- Simple setup and configuration through a logged-in protected web interface
- Comprehensive control through computers, smartphones, iPads, controllers and panels Stream media video ratio up/down conversion function
- NDI ® | HX3, RTSP, SRT, RTMP (s) decoders, up to 4K30
- Powerful and flexible OSD, text, logo and seal image overlay, user-friendly, what you see is what you get Rich and clear work or important operation status is clearly visible on the front display screen
- Equipped with standard camera tripod
- Support YouTube, Twitter, Facebook and Twitch, among others.
- Live broadcast simultaneously with different RTMP SRT RTSP and multiple CDN Easy access and plug-and-play installation through mDNS or hotspots
- Convenient and fast USB-C, DC or single-line PoE power supply

Specifications parameters

module	Sony CMOS sensor
Effective pixel	3840（H）x 2160（V）
iris diaphragm	F1.8–2.8，F1.67–3.67，F1.6–4.3
shutter	Automatic, 1/25 (30),1/50 (60),1/100 (120),1/200 (240),1/400 (480),1/800 (960),1/1600 (1920),1/3200 (3840),1/6400 (7680),1/12800 (15360)
focal distance	f3.9–46.8mm，f5.5–99mm，f5.3–130mm
noise reduction	2D / 3D
focus	hand movement
exposure	Auto, shutter priority
focal distance	Standard 6 mm, depending on the lens
Mirror/Flip	voluntarily
video coder unit	H.264 HP/MP/BP 、H.265 MP
resolution ratio	2160p25/30,1080p25/30/50/60,1080i50/60,720p50/60 for video input and output
bit stream	Up to 50Mbits/s, adjustable
frame rate	2160p is 24/25/30fps, 1080/720p is 50/60fps
coded format	H.264 / 265
sample mode	CBR / VBR
Live Preview	Web,HDMI and SDI
Lan	100/1000Mbps Gigabit
Streaming output	RTMP/SRT/RTP/UDP/RTSP
NDI	NDI® | HX3 / HX2 / HX
Video format	MP4 、MOV 、TS
Menu display	built-in OSD
white balance	One-click white balance
freeze	Freeze in one click

High-Definition Live Camera

Designed specifically for professional photography

1080P FULL HD

TC-980S HD live camera

The TC-980S HD camera features comprehensive functionality, superior performance, and diverse interfaces. Its advanced ISP processing technology and algorithms deliver vivid and lifelike imaging with uniform brightness, rich tonal gradation, high-definition resolution, and excellent color reproduction. Supporting H.265/H.264 encoding, it ensures smooth and crystal-clear video transmission even under low bandwidth conditions.

1080P HD camera with optical zoom 340, Rotating PTZ for wide-angle shooting and auto-focus precision

Infrared remote control automatic noise reduction function large aperture lens

functional characteristics

- Full HD image: 1/2.8 High quality image sensor, resolution up to 1920x1080 output frame rate up to 60 frames per second.
- Multiple optical zoom lenses: 5X,10X,12X,20X,30X multiple optical zoom lenses with 80.9° distortion free wide viewing Angle.
- Vertical mode: The vertical live broadcast camera only has a 12X optical zoom lens, with an 82.6° distortion-free wide viewing Angle, and supports vertical screen without side installation, which is easy to install.
- Live ISP library (vertical screen only): Using live ISP library, you can choose from a variety of styles and rich menu functions to achieve perfect live broadcast effect.
- Leading autofocus technology: Advanced autofocus algorithm enables the lens to focus quickly, accurately and stably.
- Low noise and high signal-to-noise ratio: The low-noise CMOS effectively ensures the camera video has an ultra-high signal-to-noise ratio. Advanced 2D and 3D noise reduction technologies are used to further reduce noise while ensuring image clarity.
- Super silent pan-tilt: high precision stepper motor and precision motor drive controller are used to ensure smooth low speed operation of pan-tilt without noise.
- Multiple video output interfaces: support HDMI, 3G-SDI, wired LAN, 3G-SDI support transmission in 1080P60 format for 100 meters.
- Multiple audio and video compression standards: support H.265/H.264 video compression, support AAC, MP3, G.711A audio compression; support up to 1920x1080 resolution 60 frames per second compression. Low power sleep function: support low power sleep/wake up, the power consumption is less than 500mW when sleeping.
- Multiple control protocols: support VISCA, PELCO-D, PELCO-P protocols, support automatic identification of protocols. Support full network command VISCA control protocol.
- RS232 cascading: RS232 cascading is supported for convenient engineering installation and use.
- Multiple preset bits: Supports up to 255 preset bits (the remote control setting call is 10).

Specifications parameters

imaging sensor	1/2.8 inch high quality CMOS sensor
Effective pixel video signal	2.07 million, 16:9
	HDMI/SDI interface video format 1080P60/50/30/25/59.94/29.97; 1080I60/50/59.94; 720P60/50/30/25/59.94/29.97
Lens optical zoom perspective	12x optical zoom f=3.9～46.1mm
	4.7° (narrow angle) 82.6° (wide angle) F1.8-F2.4
Aperture coefficient	
digital zoom	X10
minimum illumination	0.5Lux(F1.8, AGC ON)
digital noise reduction	2D&3D digital noise reduction
white balance	Manual/Auto/One-Tap White Balance/ 3000K/3500K/4000K/4500K/5000K/5500K/6000K/6500K/7000K
Focus aperture electronic shutter	Auto/manual/one-touch focus
backlight compensation	Automatic/manual
dynamic range	Automatic/manual
video adjustment	On/off
signal to noise ratio	Security/Active Level Adjustment
	Brightness, chroma, saturation, contrast, sharpness, black and white mode, gamma curve>55dB
Video output interface	HDMI、SDI、LAN
image bitstream	Dual code stream output
video compression format	H.265、H.264
audio input interface	A-IN: Dual-channel 3.5mm linear input
audio compression format	AAC、MP3、G.711A
network interface	100M network port
network protocol	RTSP, RTMP, ONVIF, GB/T28181; support network VISCA control protocol; support remote upgrade, remote restart, remote reset RS232 (huan tong), RS485
Control interface control protocol	Protocol: VISCA/Pelco-D/Pelco-P; 波特率:115200/9600/4800/2400

4K Live Camera

Designed specifically for professional photography

Embedded Medical Recording Host

Function highly integrated / Highly integrated functions

TC-430 4K Live Camera

The TC-430 is a cutting-edge UHD 4K camera featuring a 12X optical zoom and an 80.4mm ° wide-angle lens. Boasting comprehensive functionality, exceptional performance, and versatile interfaces, its advanced ISP processing technology and algorithms deliver vivid imaging with uniform brightness, rich tonal gradation, high-definition resolution, and excellent color reproduction.

Specifications parameters

Optical zoom	12x optical zoom
Focal range Angle of view	f=3.85 mm ~ 43.06 mm ±5% Horizontal: 7.59. (Narrow Angle) ~ 80.4. (Wide Angle) Vertical: 4.6. (Narrow Angle) ~ 50.0.
Aperture coefficient image sensor effective pixel video signal	(Wide Angle) F1.8 ~ F3.56±5% 8.3 megapixel 1/2.5 inch SONY CMOS image sensor 8.51M effective pixels 16:9
	Video formats supported by HDMI output: 3840*2160P60/50/59.94/29.97/25 ⋯ 720P60/59.94/50 1080P60/59.94/50/30/29.97/25 ⋯ 720P60/59.94/50 USB2.0 output supports video formats: MJPG：3840*2160P30 ⋯ 320*240P60/50/30/25 H.264： 3840*2160P30 ⋯ 320*240P60/50/30/25 YUY2：640*480P30/25 ⋯ 320*180P30/25 NV12：640*480P30/25 ⋯ 320*180P30/25
Minimum illumination	0.05Lux(F1.8, AGC ON)
digital noise reduction white balance focus mode	3D digital noise reduction Auto/manual/One-click white balance/specific color temperature Auto/manual/one-touch focus
Exposure mode aperture shutter speed backlight compensation dynamic range video adjustment signal to noise ratio	Auto, Manual, Shutter Priority, Aperture Priority, Exposure Priority F1.8 to F11, Close 1/25～1/10000 On/off Security/Active Level Adjustment Brightness, chroma, saturation, contrast, sharpness, black and white mode ≥50dB
Video compression format	LAN interface support: H.264, H.265 USB 2.0 interface support: MJPG, H264, YUY2,
Audio compression format network interface	NV12 AAC, MP3, G.711A 10M/100M/1000M adaptive Ethernet port, support POE power supply, support audio and video output
networking protocol	RTSP, RTMP, ONVIF, GB/T28181; support network VISCA control protocol; support remote upgrade, remote restart, remote reset VISCA/Pelco-D/Pelco-P; support baud rate 115200/38400/ 9600/4800/2400
Serial communication protocol	
USB protocol	UVC (video communication protocol), UAC (audio communication protocol)

functional characteristics

➢ 4K Ultra HD: Using SONY's high-quality CMOS image sensor, it supports the highest resolution of 4KP60 and output frame rate up to 60 frames per second; presents clear and realistic ultra HD video, vividly shows people's expressions and movements, and provides superb clarity and resolution of image quality.

➢ Dual code stream: USB can support the main code stream and sub code stream output at the same time, which can meet the needs of both near and far end;

➢ Optical zoom lens: 12x optical zoom, 80.4° wide Angle lens.

➢ Rich and perfect interface: support HDMI, USB 2.0, LAN, can output 4K audio and video at the same time.

➢ Auto-focus technology: Advanced auto-focus algorithm enables the lens to focus quickly, accurately and stably.

➢ Low noise and high signal-to-noise ratio: The low-noise CMOS effectively ensures an ultra-high signal-to-noise ratio. Advanced 3D noise reduction technology further reduces noise while maintaining image clarity.

➢ Multiple audio and video compression standards: The LAN port supports H.265/H.264 video compression; the USB2.0 port supports MJPG, H264, YUY2, NV12, and H265; the A-IN port supports AAC, MP3, G.711A audio compression encoding.

➢ Audio input interface: support 8000,16000,32000,44100,48000 sampling frequency, support AAC, MP3, G.711A audio encoding.

➢ Multiple network protocols: support ONVIF, GB/T28181, RTSP, RTMP protocol; support RTMP push mode, easy to link streaming media servers (Wowza, FMS); support RTP multicast mode, support network full command VISCA control protocol.

➢ Control interface: RS422 (compatible with RS485) output, RS232 input and output; RS232 supports cascading, convenient for engineering installation.

➢ Multiple control protocols: support VISCA, PELCO-D, PELCO-P protocols, support automatic identification of protocols.

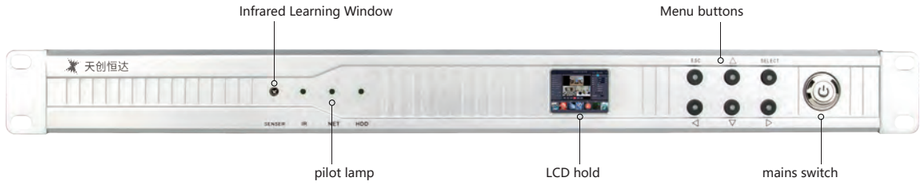
➢ Multiple preset bits: Supports up to 255 preset bits (the remote control setting call is 10).

➢ It can be used in many places: conference, education, medical care, government affairs, cloud video, collaborative office, multimedia integration, emergency command, broadcasting, justice, public security, military and other systems.

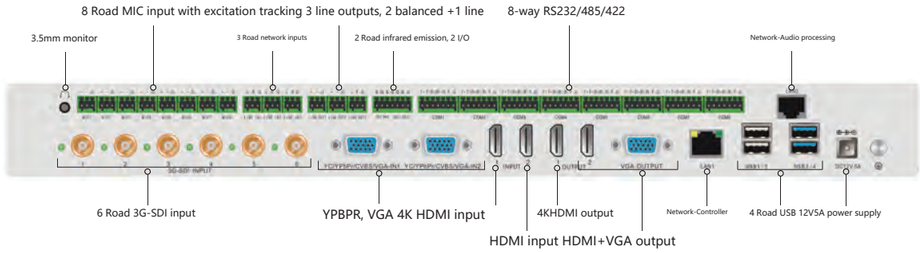
TC-6200 Embedded Medical Recording and Playback Host

The TC-6200 host is designed for medical interactive recording and broadcasting systems. It integrates multiple functions including audio processing, seamless matrix switching, intelligent control, recording/directing/point-and-click playback, video conferencing terminals, and multi-party interactive teaching. Through automatic or manual directing, it enables synchronized recording of incoming video signals in both cinematic and resource modes. The system delivers integrated embedded real-time directing capabilities, surgical recording, surgical demonstration, and interactive surgical guidance functions.

Front Panel



Back of the Mouth



functional characteristics

➢ [High integration]: integrates audio processing, seamless matrix, intelligent central control, recording/direct/pointing, video conference terminal, multi-party interactive teaching and other integrated functions.

➢ [HD]: Supports 4K input, output, synthesis and encoding.

➢ [Audio processing]: Built-in digital audio processor, support feedback elimination, echo cancellation, noise reduction, automatic gain, equalization, etc.

➢ Intelligent central control: RS232/485/IR/IO and other control interfaces are supported.

➢ [HD recording]: 4K ultra HD recording, multiple simultaneous recording of movies and resource mode.

➢ [Video conference terminal]: Supports H.323/SIP protocol remote interaction applications.

➢ [Multi-party interaction]: Support 4 MCU interactions, can be connected to mainstream third-party MCU or video conference terminals.

➢ [Image synthesis]: Supports 2 channels of composite picture, and provides 2/4/6/8/self-defined modes for selection.▷ [Streaming media protocol]: Supports RTSP/ RTMP/ONVIF/H.323/SIP/TS/ HTTP protocol.

➢ [Video source format]: supports HDMI, DVI, VGA, SDI, YPBPR, CVBS signal input, with EDID and HDCP management.

➢ [System Architecture]: Embedded hardware, stable and reliable system, support 7*24 hours continuous work.

➢ [Visualization Management]: Supports B/S web-based architecture with local GUI management and visual operation. Enables real-time audio-video streaming, device control, maintenance, and system status monitoring. The open software SDK interface facilitates secondary integration development.

Embedded Medical Recording Host

Function highly integrated / Highly integrated functions

Hardware parameters

➢ The host is a device designed for medical recording and broadcasting applications. It integrates 4K encoding/in/output support, audio processing, seamless matrix, intelligent central control, recording/directing/pointing, video conference terminal, multi-party interactive teaching and other functions.

➢ The host set recording, live broadcast, on demand, director management, storage, audio and video switching and other functions are in a single device.

➢ The host adopts embedded DSP pure hardware architecture, Linux operating system, 7*24 hours of work, equipment height 1U.

➢ Video input interface: 10 physical interfaces. 63G/HD-SDI input interfaces, 2 HDMI input interfaces and 2 VGA input interfaces respectively, supporting VGA/YPBPR/CVBS signals;

➢ Video output interface: 3 HD output, can achieve 2 different picture output, the interface is 2 HDMI output, up to 4K picture quality; 1 VGA 1080P output;

➢ Audio interface: 8 microphone access, built-in 48V phantom power supply; 3 stereo line access; 3 line output, 13.5mm headphone monitor output.

➢ Control interface: 8 RS232,2 RS422/RS485,2 IO, 1 infrared IR receive 2 send, 4 USB ports, among which 1 supports USB3.0.

➢ Network interface: 2 RJ45 LAN ports.

➢ Decoding: 14K encoding or 71080p30fps audio and video encoding, independent 2 audio acquisition;

3 Road 1080p30fps audio and video decoding.

➢ Video formats: Supports optional H.265/H.264 encoding; Audio encoding format: AAC/G.711. Recording file format: MP4. Video bitrate: Adjustable from 56Kbps to 16Mbps. Audio sampling rate: Adjustable between 8-48Hz. Audio bitrate: Adjustable from 8-320Kbps.

➢ Picture synthesis: 2 picture synthesis, providing 2/4/6/8/ custom mode selection, the highest resolution is 4K.

➢ Built-in audio processor module: Built-in digital audio processor, support feedback elimination, echo cancellation, noise suppression, automatic gain, equalization, etc.

➢ Streaming media protocol: Supports TCP/UDP/RTSP/RTP/RTMP/ONVIF/H.323/SIP/HTTP protocols.

➢ Storage: standard 2T hard disk, up to 8T support, with 7-channel real-time storage capability, in the device web and device output director interface has the function of viewing, downloading, and deleting a single video file.

Hardware technical parameters

system	Embedded Linux-3.18.20, dual-core @1.4GHz, memory: 2GB
video in	6 SDI, 2 VGA, 2 HDMI, 1 VGA, 8 microphones, 3 stereo channels (2 balanced, 1 stereo), 13.5mm monitor
video monitor 525 videon video out	
Audio input	
Audio output	
control	RS232:8 channels / RS485:2 channels / RS422:2 channels / IR: 2 channels IO: 2 channels / Network: 2 RJ45 ports / USB: 4 USB ports, including 1
caliche	USB 3.0 2TB SATA hard drive
CD-ROM	Dual USB external optical drive burning
Full load power consumption	≤39W, DC 12V5A power supply
Net weight	≤4kg
Computer case size	Length: 440mm, width 290mm, height 45mm
working temperature	Working temperature: -10℃ ~ +55℃, temperature rise: <20℃

Software parameters

➢ The embedded surgical recording and broadcasting management software must be installed in the host, and must be based on the B/S and local HDMI/VGA video output GUI dual management operation interface architecture. B/S is compatible with IE and other browsers.

➢ The system integrates video monitoring, video switching, pan-tilt control, audio adjustment, live broadcast/recording, pause and other controls, subtitles, LOGO, live monitoring, director, on-demand, system setting and other functions.

➢ Video preview: Real-time preview of 7 HD video can be input simultaneously through SDI/HDMI/remote interaction.

➢ The recording mode supports manual, automatic on, timed recording, etc., and supports two modes: movie mode and movie plus resource mode.

➢ Real-time display of recorded information, including: recording duration, video resolution, host IP address, hard disk capacity.➢ The mode of guidance can be manually or automatically switched at will.

➢ The host is equipped with four-point MCU, which supports remote teaching of four parties. It supports interactive call protocols such as SIP/RTSP/RTMP, and has call directory management, one-click call or hangup.

➢ Supports large-scale interactive teaching applications with third-party video conference MCU.

➢ Support one-click Internet QR code live broadcast for 10,000 people. Without the need to deploy other software and platforms, the recording host can realize the function of Internet live broadcast for 10,000 people.

➢ The software comes with a built-in on-demand function, which supports up to 5 people to simultaneously on-demand the host video.

➢ Surgery information: hospital name, executive department, operating room, operation name, attending physician, patient information, preoperative diagnosis and other information fields, complete records of surgery information.

➢ Supports a variety of switching effects, erase, fade in and out and other mainstream switching effects.

➢ Supports remote FTP upload/download of video, which can be recorded at the end, scheduled and other upload modes.

➢ Record audio and video files synchronously to meet the normal application of third-party editing software.

Software technical parameters

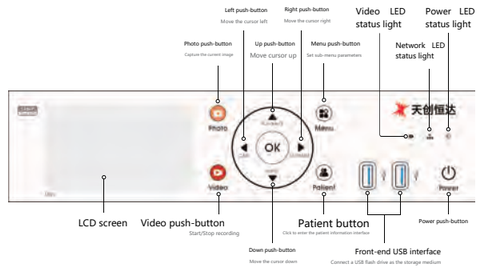
Video coding algorithm	H.265，H.264(HP/MP/BP)
Video encoding frame rate	5 to 30 frames per second
Video coding bit rate	32kbps～16Mbps
Video codec count	7编4解
Audio codec algorithm	G.711A、G.711U、AAC-LC
Audio codec sampling rate	8~48KHz
Audio codec rate	8-320kbps
Audio codec number	Part 2, Section 4, interpretation
networking protocol	TCP/IP
Streaming media protocols	TCP/UDP/RTSP/RTP/RTMP/ONVIF/H.323/SIP/TS
transcribe	Route 7
be complicated by	10 points concurrency
playback	1 Road HDMI recording file playback
Interactive agreement	RTSP/SIP/RTMP
built-in MCU	4:1080P30 MCU
B/S	Remote director management
GUI	Local director management

1080P Medical Video Recorder

Make medical imaging more convenient and intelligent

TCHD-810H HD medical video recorder

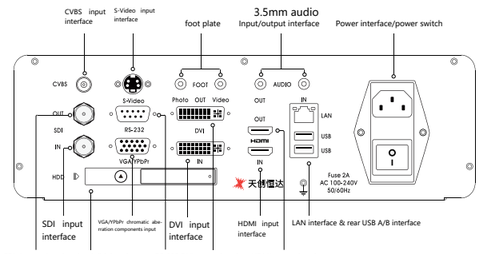
Front panel



The TCHD-810H is the industry's most cost-effective universal interface medical imaging recording device. It combines innovative capabilities such as clear images, high-quality video, a variety of video interfaces, user-friendly controls, and support for various storage devices into one.

The TCHD-810H can capture high-definition, sharp 1080p video, supporting medical equipment such as endoscopes, surgical microscopes, CT scanners, surgical cameras, arthroscopes, fluorescein angiography machines, C-arm systems, and ultrasound diagnostic devices. It allows users to save crystal-clear still images and videos to internal replaceable hard drives, external USB drives, or even record them to NFS network servers.

Back of the mouth



functional characteristics

➢ High definition sharp 1080p full interface video, image recording

➢ PiP picture-in-picture preview and video recording can be superimposed on picture-in-picture ECG➢ Two video inputs, picture-in-picture and other combinations, real-time preview and switching➢ Maximum bit rate 20mbits/s, high quality H264 encoding

➢ Supports the highest resolution up to 1080p60

➢ Simulated and embedded audio adaptive audio AAC encoding

➢ 4.3" resistive LCD screen, can be operated with gloves and is equipped with physical keys➢ QR code scanning mobile phone remote control, mobile phone, iPad, PC can be operated remotely

➢ Supports HDMI/SDI input including embedded audio, while supporting DVI

➢ The universal interface also supports traditional VGA, S-Video, YPbPr, S-Video analog support➢ Automatic video input format resolution detection, adaptive setting of recording

➢ Supports SDI and HDMI loopback, while supporting traditional analog to modern HDMI loopback➢ Supports static photos in JPG, BMP, and DICOM medical formats

➢ The image is optimized for medical applications

➢ Support mp4, mov video format, video format support video editing software➢ Supports traditional, USB foot pedals, and supports USB controllers as remote controls

➢ Just instant replay, previewable on LCD screen and external monitor

➢ Universal storage support, support built-in SATA hard disk, external USB drive, active hard disk is flexible and convenient➢ Internal and external storage up to 2 TB

➢ Also supports HD, 3G SDI input

➢ It has a dual-lens noise-canceling omnidirectional microphone and supports an external microphone with adjustable gain➢ Powerful patient information input and management functions

➢ Support USB keyboard input to edit patient information and diagnostic log

➢ Supports RTSP video streams within the LAN

➢ Support shortcut to switch video source, storage medium, playback

Software technical parameters

video coding	H.264/AVC MP/HP
resolution ratio	1920x1080@25/30/50/60fps 1280x720@50/60fps 480i/576i,1080i@50/60 SMPTE 296M/274M/292M, 425M/424M DVI/HDMI All resolutions
code check	Up to 20Mbits/s, three levels adjustable
frame rate	24/25/30fps, 50/60fps
编解码	H.264,mp4/mov packaging
fluid control	CBR/VBR
Image capture format	Jpeg, DICOM, BMP
LAN	100/1000M Base-T
Video streaming	RTSP
WIFI6	802.11b/g/n/ac, 2.4/5.8GHz
Audio sampling rate	32-48KHz, 16bits
Audio codec	AAC Stereo
voice-grade channel	2, automatic gain
microphone	2.2VDC Bias,2.2Kohm,<0.7VRMS-36dB. MIC gain adjustable 4.3" IPS, resistive touchscreen
LCD	
push-button	Anti-splash film switch
Network Remote Control	Mobile phone, iPad, PC, RESTFUL interface Linux system can be upgraded
firmware	
memory	External: 2 x USB drive, USB HDD; Internal: 1 x SATA; Format: FAT32, up to 2T

4K Medical Video Camera

Make medical imaging more convenient and intelligent

TCHD-810 Pro 4K Medical Video Recorder

The TCHD-810 Pro is a medical HD video recording device that combines simplicity, ease of maintenance, powerful performance, and versatile functions. With minimal interfaces and highly integrated design, it fully meets the needs of medical imaging documentation.

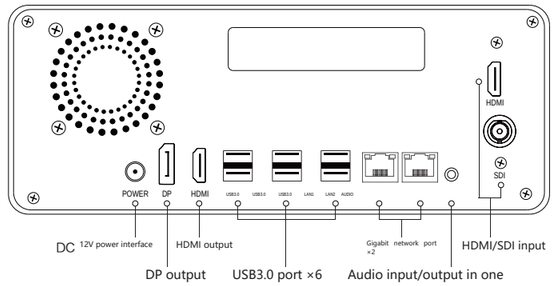
The TCHD-810 Pro supports 4K@60fps HD video recording. It transmits video feeds to the system via HDMI and SDI interfaces, automatically detects formats, displays them in real-time, and adjusts recording settings accordingly. Additionally, external monitors can be connected through HDMI or DP interfaces for previewing videos while performing photography and recording operations.

The system's auxiliary functions are equally powerful, allowing flexible customization of recording themes for easy storage. Users can freely add or remove image and text watermarks as needed. Audio volume levels and video contrast/brightness can be adjusted according to personal preferences. The system's USB3.0 port supports external storage devices like USB drives and external hard drives, which are automatically detected. The system will display real-time feedback on the screen regarding media capacity and recording duration.

Functional Characteristics

- Single channel HD video, image lossless recording
- Supports resolutions up to 4Kp60
- Automatically detect video resolution and change recording Settings
- Video interfaces include HDMI, SDI
- Video high quality H.264 encoding
- Real-time display of video resolution, frame rate and other formats
- Bit rate 8mbps--30mbps multi-level adjustable
- Adaptive Audio AAC encoding
- 8.8 inch anti-fingerprint nano touch screen: resolution: 1600*600, brightness: 900cd/m2▷ Supports HDMI/SDI input, embedded audio
- Record videos and pictures for online preview
- Image static photo jpg; video MP4 format
- Image and video formats support most video playback, editing software
- Free to change the recording theme
- Supports external screen preview video
- The recording time can be divided into three optional segments: 10 minutes, 20 minutes and 30 minutes▷ Text and image watermarks can be added
- The watermark can be adjusted in position, size and transparency
- The volume of the audio can be adjusted
- Video brightness, contrast, chroma, saturation can be adjusted according to actual needs
- The system can convert the input video into 2D / 3D signal, and there are two formats of 3D mode available for selection, namely up and down and left and right
- The system can record videos that have been changed to 3D mode
- External USB drives, portable hard disks and other storage media can be used
- The storage medium can record the duration of the message
- Real-time monitoring of media status
- High cost performance, simple system maintenance
- USB2.0 and USB3.0 support all kinds of peripherals
- Supports external mouse and keyboard

Back of the mouth



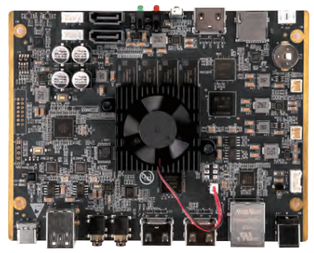
Software technical parameters

Video codec	H264−MPEG−4 AVC(part 10)(avc1)
Video resolution	4096*2160 1920*1080
Video frame rate	30 / 50 / 60fps
Video bit rate	8～30mbps adjustable
fluid control	VBR
Audio codec	MPEG AAC Audio (mp4a)
Audio sampling rate	48000Hz
Audio bits per sample	32
Image capture format	DICOM、JPEG
SDI	BNC，SD / HD / 3G
HDMI(Type−A)	The maximum resolution is 4096 x 2304@60Hz
DP	The maximum resolution is 4096 x 2304@60Hz
AUDIO	Line output + MIC2 and 3.5mm jack (default CTIA, OMTP standard selected by resolution) RJ45,10/100/1000 Mbps
network	
USB3.0	postposition IO
memory	External USB drive, mobile hard disk

4K Medical Video Board

Make operations more convenient and processes more efficient

TCHD-MD850 4K Ultra HD Medical Video Board



TCHD-MD850 4K medical video board is an ultra HD 4K medical video recorder launched by our company. It is designed for rapid setup and easy use. Users can design their own medical video recorders or integrate them into medical equipment through this product.

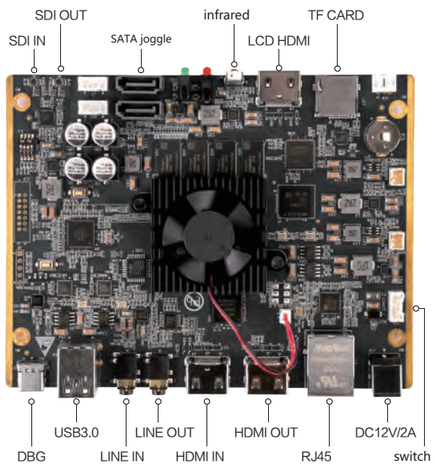
This product features a range of powerful capabilities. It includes automatic video connection detection and auto-resolution detection, enabling quick and hassle-free setup. The device can configure itself while preparing for recording, making operations more convenient and processes more efficient.

The medical video recorder contains a built-in hard disk drive for reliable recording and data backup. Users can also record to USB storage and hard disk drive for archiving, and share and play back on other devices and locations.

Functional Characteristics

- 4K video recording, with a resolution of up to 3840x2160, records clear and sharp 4K images with rich details. In terms of picture quality, its clarity has been greatly improved on the basis of the original HD video recorder.
- The video is recorded simultaneously on the internal hard drive and external media, allowing users to record the video file simultaneously on the internal hard drive, external USB drive, and TF card.
- Real-time streaming of images captured by cameras, endoscopes and other devices to other parts of the consulting room, outside the operating room, or offices.
- Support serial port and network port control, front-end with status information of pre-monitoring interface.

Introduction to the interface



Software technical parameters

Record video format	H.264/H.265/XAVC
Recording audio format	LPCM，AAC LC
File format for records	MP4、AVI
File data format	YUV420、YUV422
Input resolution	4K pattern： 3840x2160p:60/59.94/50/30/29.97/25/24/ 23.98 2K mode: 1080p23.98/24/25/29.97/30;1080p50/59.94/60; 1080i50/59.94/60; 720p23.98/24/25/29.97/30;720p50/59.94/60
Record bit rate (4K)	High bit rate: 120Mbps Medium bit rate: 50Mbps Low bit rate: 20Mbps
Record bit rate (HD)	High bit rate: 30Mbps Medium bit rate: 20Mbps Low bit rate: 10Mbps
Input interface	12G-SDI×1, HDMI2.0×1 audio (3.5mm stereo small jack)×1 AC power socket (3-core)×1
output interface	12G-SDI×1, HDMI2.0×1 audio (3.5mm stereo small jack)×1
Other interfaces	USB 3.0 (Type A) × 2 SATA port ×2 TF Card × 1 RS232 (TTL level) × 1 Network (RJ-45,1000 Base-T/100 Base) × 1
power requirement	100 V to 240 V AC, 50/60 Hz
input currenton	1.25 to 0.52 A
service temperature	5℃-40℃ 20% to 80% (maximum wet bulb temperature: 30℃)
operation humidity	

Surgical Mobile Teaching Trolley

Flexibility, High Quality, Networking, Reliability

TCHD-550 Surgical Mobile Teaching Trolley

TCHD-550 surgical mobile teaching trolley can broadcast live view in different operating rooms, which is simple to deploy, easy to use, highly reusable and cost-saving.

Product Features

▼ flexibility

Real-time recording for clinical surgery, the field camera can be dragged and dropped flexibly, the maximum arm length is 1500mm; single person operation, can be flexibly moved in different operating rooms.

▼ networking

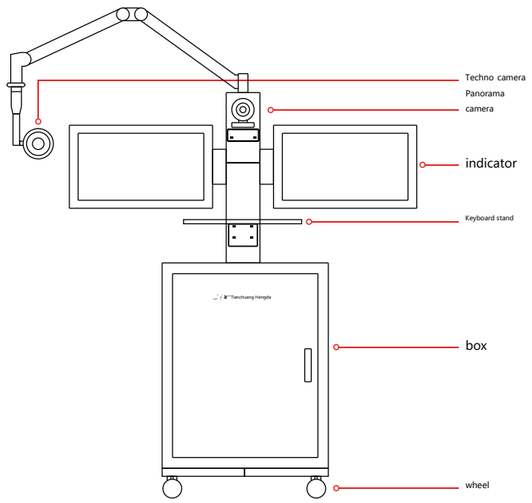
During the live demonstration, students do not need to enter the operating room, and can observe the operation in real time through the network, no longer limited by the operating room space and observation perspective.

▼ high-quality

The system realizes the access, acquisition and recording of full HD (1920*1080 pixels) and other resolution video signals.

▼ reliability

The recorded data adopts safe and reliable storage mode (large capacity hard disk), which is convenient for transmission, research and study anytime and anywhere.



Product Parameter

- Medical mobile trolley, imported cantilever, surgical field camera, panoramic camera (optional), recorder (optional).▷ The chassis part is made of metal steel frame, with a large box body, which can hold 15U standard cabinet equipment.
- The columns are made of high strength thickened steel plates.
- High strength anti-wrapping silent medical wheels are used.
- Hidden cabling design.
- The universal arm is imported, and the unfolding distance is 1.5 meters, which can be pulled up to 2.3 meters.
- The vehicle can meet the 10 degree tilt test, and the vehicle can meet the 50Kg equipment load walking.

Size of Product

▼ Pushcart size

The vehicle height is 1700mm, the chassis length is 580mm, the width is 540mm

▼ Cabinet dimensions

High 700mm, wide 550mm, deep 450mm

▼ Imported cantilever dimensions

Unfolding length 1.5M, shrinkage 0.7/0.8M

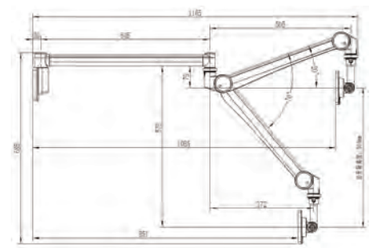
Practical Teaching Cart

Flexibility, High Quality, Networking, Reliability

TCHD-570A Practical Teaching Cart

Product Features

- Adopt hidden line design;
- The pushing height is 1.8 meters, and the bottom adopts 3-inch anti-wrapping swivel wheel, which can rotate horizontally 360 degrees to any Angle;
- The top cross arm has an extension length of 1.2 meters and adopts imported spring arm to accurately pull and position the height;▷ Box: size height 530*460*430mm;
- Standard 12V50Ah battery, with power display and switch, can be configured with boost module.



Specifications Parameters

▼ Car body size

Height of vehicle (with wheels)	182cm
Height of vehicle (without wheels)	170cm
Car body material	Full hardware structure
Car body paint	Roughened baked paint white
pallet	35*25cm, edge open U-shaped handle groove
Panoramic tobos	Includes panoramic camera tray bracket
Display stand	Includes display stand, 8kg load capacity, supports 75*75 100*100 wall hanging screen size

▼ box

Box dimensions	530*460*430mm
Box specifications	Battery level display and power switch; The box contains two shelves inside, the top shelf is installed with batteries, and the second shelf is placed with equipment. The shelves are equipped with U-shaped grooves to facilitate securing equipment with straps.
Whether the box is locked	Buckle

▼ wheel

wheel	3 inch medical silent wheel, with lock
Wheel brackets	PA+GF23
Wheels material	PP+TPU
Diameter	75mm
Rotation	22mm
bearing	30–50KG

▼ Camera pan arms

Stem material	alufer
pigment	white
angle of pitch	The horizontal bank Angle is 20 degrees, the pitch Angle is 50 degrees, and the total elevation height is 500mm
Horizontal rotation	The horizontal limit is 540 degrees, and the limit between the lifting rod and the rotating arm is 270 degrees
Load-bearing range	0.5–2kg
Lifting structure	Mechanical spring 1165 mm
Stem length	
Stem weight	3.5kg
way to install	Installation of the pusher
Supporting brackets	1. Supports the installation of gun-shaped cameras 2. Support for display installation 3. Support other cameras, such as the Suye camera above three choices
Life span	200,000 times
Equipment wiring harness	The wire is connected to the equipment through the support arm at will, and there is no exposed wire bundle. There is anti-scratch wire protection silicone inside
Joint protection	The rotating joints have anti-collision wall silicone
Pitch and angle adjustment	The pitch angle can be adjusted twice

▼Standard battery

capacity	12V 50Ah
Battery type	Ternary lithium
output voltage	12V 10A
charge power supply	12.6V 5A